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ABSTRACT

Described is Vermont's program of individualized driver education for handicapped secondary students 15 years or older and for disabled adults no longer in school. Sections outline the following program components: three R's of driver's education (responsibilities of the schools, regulations of motor vehicles, and rights of the handicapped student); program development (including research on driver education programs around the country, a project to develop motor vehicle regulations, and inservice training on handicaps for driver educators and motor vehicle inspectors); assessment of the special needs of the handicapped individual; Vermont's procedures on driver education for the handicapped; sample forms for program use; recordkeeping; program costs; and definitions. Tips for driver educators are illustrated with pictures throughout the booklet. (SBH)

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VERMONT'S PROGRAM OF INDIVIDUALIZED DRIVER EDUCATION FOR THE HANDICAPPED

EDUCATION

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THE NEED

Ours is a mobile society with school, work, recreation, church attendance, medical and dental care contingent upon the use of a car. Constant dependence upon others to drive is not what a mature person wants, but rather a way to be independent and to get about upon need or whim. This service, therefore, was developed to offer every handicapped person the chance to be considered for driving, BUT WITH THE ULTIMATE PRIVILEGE OF DRIVING BASED UPON THE DEMONSTRATED ABILITY TO DRIVE SO THERE IS SAFETY FOR THE DRIVER AND ALL OTHERS AS WELL.

THE ACTION

With funds from the Elementary and Secondary Education Act (Title III for 1974-75 and 1975-76) granted to the Chittenden Central School District in Essex Junction, the following PLANNING COMMITTEE researched the legal/service aspect of driver education for the disabled country-wide, studied Motor Vehicle regulations and existing state and local programs, offered training by a world renowned expert to school and commercial driver educators, created a screening process for people whose functional disabilities warranted consideration by specialists, and ultimately developed an entire program briefly described in this brochure.

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THE PLANNERS

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Ex Officio - Allan Gear - Legal Consultant (Drives with adaptive equipment)
William Singley - Governor's Committee on Employment of the Handicapped

* - The original planners
** - Added when the proposal was accepted
*** - Added during the second year

EC 104070

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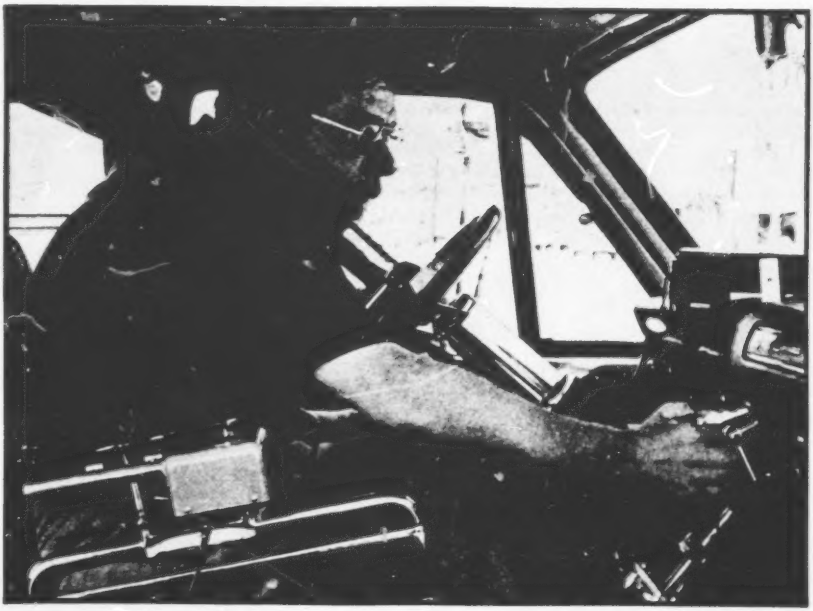
Terry O'Brien Proj. Dir.
Vt. Dept. of Education

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

SEVERELY HANDICAPPED ---------- and yet he drives with safety!

ABILITIES: Good thinking/scanning/planning/perceiving; good vision with glasses; normal head turning; strong arm control; mechanical aptitude; excellent driving record before accident.

DISABILITIES: Limited strength in fingers and wrist; total paralysis below chest.



COMPENSATORY VEHICLE AND EQUIPMENT

STEERING: Small steering wheel with 6" extension to bring it closer; 2 U-shaped steering devices, open at top, for fingers and wrist so steering can be directed by strong shoulder and elbow; device for right side.

OTHER CONTROLS: BRAKE/GAS device on left of push/right angle type with push for brake and toward lap for gas and with potential for simultaneous use of gas and brake for hill start up; DIMMER SWITCH, HORN, DIRECTIONAL LEVER, WINDSHIELD WIPER, IGNITION, AND AUTOMATIC SHIFT LEVER in positions standard for car make and used by nearer hand; MICRO BRAKE, with but minimal strength needed, slips lever to lock brakes thus meeting Motor Vehicle requirements re: secure emergency and by-passing limited hand strength problem; WELLS IN FLOOR AND CHAIR LOCKING DEVICE to secure motorized wheel chair in driving position; SHOULDER BELT to insure balance; CAUTION LIGHT on roof; CITIZEN'S BAND RADIO for securing help in time of car trouble; SPECIAL VERMONT LICENSE PLATE WITH INTERNATIONAL SYMBOL of the handicapped; 3" BLUNT END SCREW WITH NUTS TO ADD LEVERAGE TO KEY HANDLE and make use of key possible; POWER EQUIPMENT (windows, doors, brakes, steering); BATTERY OPERATED HOIST to lift wheel chair to van floor.

DRIVER'S LICENSE RESTRICTIONS: "Totally equipped for hand operation."

(This is Dave. In "DAVE CAN DRIVE", the project movie, he shows you how!)

ACKNOWLEDGEMENTS

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USE OF BUILDING FOR WORKSHOPS; DRIVING SIMULATOR FOR WORKSHOPS & SCREENING

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SCREENING SITE PERSONNEL (Names of therapists omitted because this changes)

DEPARTMENT OF REHABILITATION MEDICINE, DE GOESBRIAND UNIT, BURLINGTON-FOR NORTHERN VERMONT
Physical Therapists) to test functional skills including all
Occupational Therapists) aspects of vision needed in driving
ESSEX JUNCTION EDUCATIONAL CENTER) DRIVER EDUCATORS to test manipula-
WINOOSKI HIGH SCHOOL) tion of car controls and potential for safe driving.
VERMONT ACHIEVEMENT CENTER, RUTLAND, FOR SOUTHERN VERMONT
Physical Therapists) same as above
Occupational Therapists)
MT. ST. JOSEPH ACADEMY, Rutland - Driver Educator (to function as above)

INSTITUTE OF REHABILITATION MEDICINE, NY UNIVERSITY -
1974-WORKSHOP LEADER, JIRI SIPAJLO & CAR EQUIPPED WITH ALL TYPES OF ADAPTIVE EQUIPMENT
1975- " " " " & MOVIES, LITERATURE
1976-WORKSHOP AT INSTITUTE OF REHABILITATION MEDICINE OF NEW YORK UNIVERSITY IN NEW YORK CITY FOR THREE PERSONS DOING SCREENING AT THE VERMONT ACHIEVEMENT CENTER

DEPARTMENT OF REHABILITATION MEDICINE, DR GOSSERIAND UNIT, BURLINGTON DEMONSTRATIONS FOR TITLE III EVALUATORS; HAZEL PARRY, PHYSICAL THERAPIST, ON TRANSFERS FOR 1975 WORKSHOP; PICTURES FOR THIS MANUAL.

VERMONT ACHIEVEMENT CENTER; RUTLAND MOTOR VEHICLES INSPECTOR; ROBERT FRANZONI (CAMERAMAN)

FOR PROJECT MOVIE

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1974 - ESSEX JUNCTION

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R. Sukel - Mt. Anthony H.S.
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Rehabilitation Medicine personnel, Special Education Consultant

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L. Lyon - Mt. Abraham H.S.
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Others: Rehabilitation Medicine personnel, Children's Rehabilitation, Governor's Comm. on Employ. of Hand., 2 Title III employees of related project on Vocationally Oriented School Planning for the Handicapped

1976 - NEW YORK CITY

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Diane Jackson, Occupational Therapist
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Denis Roy - Winooski
Richard Durgin - Rutland
David Sagi - Rutland
John Nelson - Newport
Jim Jacobs - Essex Junction
Ray Foos - Burlington

RESEARCH OF MOTOR VEHICLE & DRIVER EDUCATION PROGRAMS IN DRIVER EDUCATION PROGRAMS IN DRIVER EDUCATION for the HANDICAPPED IN ALL OF THE 50 STATES AND CANADIAN PROVINCES

Carol Clawson - Hinesburg
Volunteers

PHOTOGRAPHS

Rutland Herald - Petra Langer (large pictures on pages 2 & 6)
John F. Smith - Shelburne (small pictures on page 6)
George Bellerose - Burlington (balance of pictures)

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PARKING SPACES

MUST BE
12 FEET WIDE
(RATHER THAN
STANDARD
10 FEET)
FOR
VAN WITH LIFT,
WHEEL CHAIR,
WALKERETTE,
OR CRUTCHES.

•

ADJACENT
CAR PARKED
OVER LINE
ON LIFT SIDE OF VAN OR DRIVER'S
SIDE OF CAR WILL LOCK HANDICAPPED
DRIVER EITHER IN OR OUT OF VAN/CAR!

THE 3 R's of DRIVER EDUCATION for the HANDICAPPED

RESPONSIBILITIES (of the schools)

The law defines the responsibility of schools in providing DRIVER EDUCATION to "pupils whose parent or guardian is a resident of Vermont and who have reached their fifteenth birthday and who are regularly enrolled in a public or private high school approved by the State Board ...". "The State shall pay to each school providing an approved driver education and training course the reasonable cost thereof." THERE IS NO EXCLUSION OF ANY STUDENT IN THESE PROVISIONS.

Because Vermont had no provisions to meet the SPECIAL NEEDS OF STUDENTS WITH HANDICAPS, this project was developed so schools would have the "TOOLS" to help, and so disabled adults, no longer in schools, might have access to needed services using non-school funds.

REGULATIONS (of Motor Vehicles)

The potential driver who has a handicap or a licensed disabled one must abide by Motor Vehicles Regulations like anyone else:

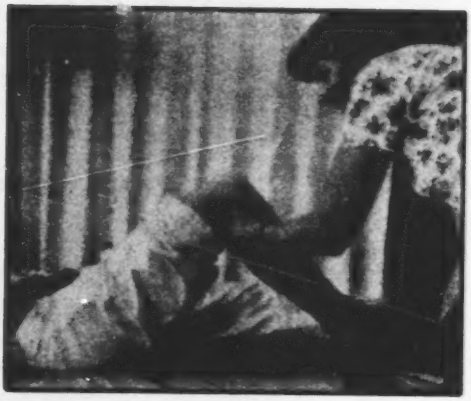
- Passing the test for a LEARNER'S PERMIT
- If handicapped while a DRIVER'S LICENSE IS IN FORCE, to report the handicap at the time of license renewal
- Passing a DRIVING TEST for a LICENSE
- MEETING THE FEW MEDICAL LIMITATIONS of Motor Vehicles
- Accepting the decision of INABILITY TO DRIVE if the medical facts, reviewed by a panel of medical specialists appointed to serve Motor Vehicles, rules in this way.

RIGHTS (of the student with a handicap)

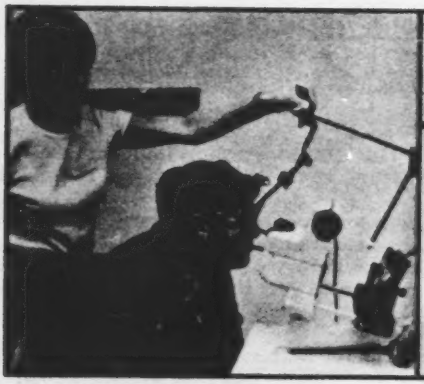
1. If the handicap is excluded by Motor Vehicle Regulations this is final and there is no action to take. (Ex. Less than 20/40 CORRECTED vision in the BETTER eye.)
2. If the medical specialists, acting for Motor Vehicles, advises against driving the student has the right to request the reasons in writing.
3. If the school has failed to plan or provide for Driver Education on someone's judgement that the handicap precludes driving, the student has the right to challenge this via the following sequence:
   - Request a hearing of involved persons in the student's own school with school personnel, the student, parent(s)/guardian and counsel present.
   - If the grievance is not settled the student and/or parents may put the facts in writing for the Commissioner of Education and send via the Division of Special Education State Dept. of Education.
   - If the impartial hearing officer, appointed by the Commissioner

to study the facts on both sides fails to arrive at a solution, the matter may be reviewed by the State Board.
THE ULTIMATE PURPOSE WOULD BE TO BE SCREENED and have Driver Education only if it was found that there was functional ability sufficient to have Driver Education.

4. If a student's physician failed to grant permission for screening the reasons should be put in writing for the school Driver Educator, with parental consent in writing, and with the reasons discussed with the student by some school personnel.
5. If the parents of a minor refuse to sign permission for screening, school officials should interview the parents to explain the many safeguards all along the way - screening, passing training, passing the licensing exam - but the final decision remains with the parents until the age of majority.



Braking and accelerating are essential to safe driving. Part of the screening done by therapists, if a prospective driver is to use either leg, is to test strength, the ability to bend and extend the leg, and rotating leg in or out if possible.



Testing for peripheral vision critical to driving.

Using a plastic goniometer, flexion and extension of elbow is measured.

HOW THE VERMONT PROGRAM DEVELOPED

THE IDEA IS BORN AND NURTURED

The Division of Special Education and Pupil Personnel Services, informally exploring common unmet needs, heard from a Rehabilitation Nurse whose work extended throughout the State of the penalty imposed on people with handicaps who were never given the chance to drive. Only a few of the more aggressive and often mechanically inclined somehow managed to work things out on their own and pass the Motor Vehicles test. The rest, and this constituted most of those with disabling handicaps, were either homebound or dependent upon others. The Motor Vehicle Manual, used in preparation for the Learner's Permit examination, had been re-written into a vocabulary at about a fourth grade level to accommodate some of the learning disabled. The Department of Rehabilitation Medicine of the DeGoesbriand Unit, Medical Center Hospital, Burlington, involved with many late teenagers and young adults, had initiated exploration of possibilities for a full training program of driver education, and found interest but without subsequent action, and thus were forced to try and develop some services for their own patients through Driver Education at the Essex Junction Educational Center and the use of their simulator. Action which resulted in the eventual Title III funding of this project actually started with a meeting of a Consultant from Special Education, the Director of the Department of Rehabilitation Medicine, their Director of Physical Therapy, an Occupational Therapist, and a Driver Educator from Essex Junction on September 25, 1973. It was decided to use the next few months exploring the field for facts before approaching either the State Driver Education or Motor Vehicles.

INITIAL EXPOSURE AT THIS COUNTRY'S FIRST SYMPOSIUM ON THIS SUBJECT

Just as the rehabilitation concept evolved from need following World War II, so Driver Education for the Handicapped then had its start - but obviously a slow one as shown by the October 1973 minutes of the first meeting on the subject for the entire country. It exposed the "Vermont Explorers" to many facts:

In driving there is a vast difference between a right and a privilege. Driving is an earned privilege won after demonstrated competence in driving. This applies to everyone, handicapped or non-handicapped alike.

Simulators may have their place but they are not a "must" in a program for the handicapped and actually may cause a re-learning process as action of simulator controls may vary from corresponding ones in real cars.

Attention to functional abilities and medical problems is needed in deciding possible risks, adaptive equipment and/or car modifications. The programs described were using rehabilitation facilities, with especially trained staffs, for this kind of review.

Whether a car or simulator is used, the trainee's ability to manipulate all controls and to perform two functions simultaneously is tested.

Evaluations which are failed may be repeated. Trainees are given the full details of the evaluation.

Adaptive equipment is prescribed only when safe driving without it is impossible.

Added time is needed for many handicapped trainees - commonly twice as long as for trainees without handicaps and in a few instances up to slightly over 100 hours.

In Ohio, re-examinations are required from 6 months to 4 years for such problems as diabetes, epilepsy or heart disease because of the risk of sudden lack of consciousness in some people. Drivers with adaptive equipment MUST drive cars only with automatic shifts.

Reciprocity among states is confusing because of differences in laws.

International road signs help by-pass the need to read; oral tests to non-readers prevents failure with the inability to read written questions.

Insurance may be hard to get or be costly to the handicapped dependent upon the insurance coverage related to driving:

Private, Sub-Standard Specialty Risks - Poorer than average risks may cost 20% more for the driver with a handicap and coverage may be limited.

Standard - Standard or lower than average risks. No extra cost but company may be highly selective of those it insures and rule out some with handicaps.

Required Automobile Insurance - There has to be coverage for any licensed driver and at the same rate but riders may show reduced coverage for the handicapped.

Ultimately accident figures may reverse it.

A demonstration of a study done by a group of paraplegics, dependent upon hand controls and concerned about the lack of local, state or federal regulations anywhere regarding them, did their own study. In one instance, a commercially available set of equipment, controlling such vital areas as the accelerator and the brake, was made of wood dowels, fastened together with friction tape and spray painted to resemble metal. Many less obvious defects were found. "We need some Ralph Nader intervention in this field" was a comment.

THE PROJECT'S COUNTRY-WIDE RESEARCH

(Note: After initial sessions with Driver Education and Motor Vehicles, a proposal was made and funded by Title III of the Elementary and Secondary Education Act through the Chittenden Central Supervisory Union and for 1974-75. As complications arose and initial objectives were not met, the time wax extended for an additional fiscal year.)

In answer to a separate questionnaire for Driver Education and Motor Vehicles with each state and even Canadian provinces contacted for

specific data, all but 5 of the 50 states responsed, and 6 Canadian provinces as well.

No two programs are alike; no Motor Vehicle regulations are alike; reciprocity is offered or not by different states.

With frequent reference to the 1966 Federal Highway Safety Act which "provided that each state, in cooperation with its political subdivisions, shall have a Driver Education and training program that is available to all youths of licensing age(including handicapped)", it seemed as if reference to the Act and the fact that no one was barred made up for the lack of a special program. In some instances it was obvious that had there been guidance on how to start a program designed to meet the special needs for the handicapped one would have been developed.

Currently, each state has to go through the struggle to develop an adequate program alone. There are no guidelines from any source to serve as a guide.

From the information supplied only 14 states have programs with any semblance of statewide coverage. The comprehensive aspect of different programs varied.

Only one state requires doctors to report an acquired handicap of a person with a driver's license, which was currently valid; most favored re-examination requirements for all drivers, or differently timed re-examinations dependent upon the nature of the handicap because doctors, commonly faced with the possibility of litigation, would not always conform.

Most states use the same Driver's License for all with restrictions coded.

Connecticut has a program which has passed its 25th ANNIVERSARY which is run by its Motor Vehicles Department. They have staff and an especially equipped car to use for any handicapped person in the state. At the end of 25 years, and about 4000 licensed drivers with disabilities, the safety record was unique:

> While there were some accidents and some caused by the driver, NOT ONE OF THE DRIVERS WITH A DISABILITY WAS GUILTY OF SERIOUS OR DANGEROUS VIOLATIONS!

The handicapped driver, in the midst of an accident, immediately worries about revocation of a license quite unlike the non-handicapped one. Therefore SAFETY & CAUTION are not taken lightly by the driver with a handicap.

Many people, formerly homebound and dependent, have found freedom and self support once they had the mobility which driving allows.

Several states have developed CURRICULUM GUIDES especially for high school students with severe deficits in learning ability; one state has a general guide complete with a DIARY of the special driver training approaches needed for a person unable to walk - Oklahoma.

Several states turn to established rehabilitation centers, as Vermont's program does, to check those people whose functional/medical ability is too complex to be assessed by people without training in the fields of anatomy, physiology, motor function and dysfunction, and compensatory therapy.

Most states which have a screening program allow re-examination after failure; most Motor Vehicle Departments likewise offer another chance(s).

Commonly the factors listed as being essential to safe driving for anyone are:

1. Driving knowledge - knowing car controls and the rules of the road
2. Specific visual capabilities
3. Manipulative capacities (turn keys, open doors, rotate the wheel, etc.)
4. Perception, judgement, response factors.

The Department of Health, Education and Welfare in Washington, D.C. published an excellent booklet "Guidelines for Medical Review Boards" (which many Motor Vehicle's Departments have).

The term "Epilepsy" tends to instill fear in many; "Lapse of Consciousness" avoids this and covers other conditions like diabetes and heart disease as well.

VERMONT'S COMMISSIONER OF EDUCATION

A firm believer in Driver Education for all, the following facts were given in a January 29, 1975 memorandum to the educational community:

"The prominence of traffic safety education in the federal statute serves to intensify state and local endeavors to improve the quality of instruction in driver and traffic safety education. The goal of the driver education program is to provide an opportunity for all Vermont youth to enroll in a high quality program of instruction prior to being licensed to drive.

Statistics from the Vermont Banking and Insurance Department clearly document the fact that the Vermont high school driver education program saves one serious accident involving personal injury and/or death for every one hundred drivers trained. During fiscal year 1975, approximately 10,000 youth will complete the Vermont high school driver education program, thus, preventing approximately 100 deaths and/or serious injuries. What does this mean in terms of dollar savings to the citizens of Vermont?

It is not easy to put a dollar value on human life. However, the National Safety Council estimates $52,000 per death and $3,100 per injury as average values while the National Highway Traffic Safety Administration estimates the costs at approximately $240,000 per death and $7,000 per injury.

Being conservative and using the National Safety Council's estimates and assuming that twenty-five percent of the serious accidents prevented involved one death and the other twenty-five percent one injury, the dollar savings to Vermonters in fiscal year 1975 will be $1,532,500. If we use the National Highway Traffic Safety Administration's estimates and assume that fifty percent involved one death and the balance one injury, we could come up with an estimated dollar cost of $12,350,000. to not have high school driver education.

Disregarding the human factors involved and considering only the dollar value, it comes out something like this: Between the state and local contributions, driver education costs Vermonters approximately $750,000 per year. Depending on which of the above figures seem to be more realistic, it saves Vermonters from $1,532,500 to $12,350,000 minus the cost of $750,000 or a net saving of from $782,500 to $11,600,000 per year.

This program is administered in accordance with the statutes of the State of Vermont (VSA Title 16 SS 1045-1046, also Act #260 of 1972)."

(Note: The above relates to Driver Education in general because Driver Education for the Handicapped in Vermont had not become a reality at that time. However, there is Commissioner/State Board support for the entire program, and for instruction in the safe use of motorcycles as well since, with the vast increase in their use, young people trained in Driver Education and licensed to drive a car are re-appearing as handicapped persons needing this special type of driver training.)

WORKSHOP-CLEANED INFORMATION

The development of the automatic shift in cars "opened the door" to driving for the handicapped.

A more meaningful division of handicapped drivers rather than the actual diagnosis is the time the handicap occurred - "congenital" or "acquired". On the problem side, congenitally handicapped drivers have often been overprotected, have not gone through the normal developmental milestones which help to utilize the body's full potential, and often lack experiences in living which aid in driving. On the plus side, they may have mastered wheel chair management, transfer, and the dangers inherent in crutch or wheel chair use. The person with an acquired handicap may have been a driver, and even without being one comes to driver education with a wealth of experiences which facilitate driver education, but with the need for a re-learning of many, many skills.

A "cruise control" attachment, a way of setting a constant speed, provides rest for the driver using hand controls on interstates and super highways, but not on Vermont's curving, hilly roads.

NEVER PRE-JUDGE PATIENTS BY CATEGORIES such as "Quads (quadriplegics) will be difficult". Individual differences bring out marked variation in motivation, tolerance, the speed of learning or its lack, the ability to master an array of skills simultaneously or its lack, etc.

Patients who are unable to transfer from wheel chair to car can be taught to drive safely. There are hydraulic lifts which can be used for transfer.

Assistive equipment and a handicapped driver's strength must be tested under all circumstances common to driving - at all speeds, night and day, on different road surfaces, in traffic or its lack, up and down hills, the need for sudden braking, sudden readjustment to by-pass another unfortunate driver, on wet, dry, slippery roads, etc.

Today a medical prescription against driving can result in a patient suit on the basis that rights are denied. A system for adequate screening/training coupled with careful Motor Vehicles testing is a "must" for safety.

Handicapped people, ready to learn to drive, want to know what they can do to learn to drive. They don't want pity. They don't want to be asked to review their past history. Therefore, the driver education instructor should start immediately on "What do you have to work with?" and then get on with training exactly as is done with the non-handicapped. This requires preparation by the Driver Educator before starting training.

Handicaps are both VISIBLE and INVISIBLE. Both must be considered in driver evaluation and training.

First emphasis is on the rote learning needed to pass the written test. When that is done, there is need to locate the handicapped person's strongest part and what CANNOT be done even when this strong part is fully used. Modifications in the form of prosthetic devices or adaptive equipment are determined after a careful inventory of body parts which work and do not work, the job the non-functioning member normally does in driving, and ways to make another member take over for the non-functioning member. (In the Vermont plan this would be done in the screening process.)

Most wheel chairs are steered by rear wheels; cars by front wheels. Wheel chairs travel up to 4 mph; cars at different speeds. Wheel chair users do not require the fine eye-hand coordination of the driver. Sports help non-handicapped people pre-determine possible collision. Congenitally handicapped people lack this experience.

In driver education for the handicapped it is essential to avoid bad experiences. Focus on how to do the right things at the right time. Consider each tiny component and progress to more advanced steps only when there is success.

MOTOR VEHICLE INSPECTORS HAVE THE FIRST AND LAST WORD ON ALL DRIVERS. They have little time to consider differences. A visit to a Motor Vehicles inspector would help in driver education for the handicapped because the Inspector must be involved if a handicapped person is to drive. Their lot is not easy; their responsibility is great. It is well to establish a meaningful relationship with the area Motor Vehicle Inspector because, contrary to non-handicapped students who arrange licensing on their own, it is necessary for driver education instructors to go with a handicapped person throughout the entire process. The usual inspector is unfamiliar with the potential for driving of a handicapped person. Therefore, a great deal of demonstration, explanation, etc. may be needed to dispel personal biases and fears so the handicapped person's driving skills may be fairly appraised.

Always use the simplest equipment and the fewest modifications possible. Cars should have the following:

Maximum visibility from the driver seat
Comfort
2 door sedan for wheel chair user (to avoid the center bar of a sedan which interferes with driver managed wheel chair storage)
Cost - no greater than needed
How it will be used (air conditioning a must for desert use; V8 engine for mountain driving; front wheel drive for deep snow and mud)
Minimum of what is needed (power brakes, power steering, power windows, power locks, etc.) for the individual's disability.

Vocational Rehabilitation may buy the prosthetic and adaptive equipment and finance driver education; VA does this and purchases car or van for a handicapped veteran.

Cars may run to $4,000 (+ or -) and special vans with lift $8,000 to $11,000. Therefore, it is essential to delay purchase until it is fairly certain the patient has the potential for safe driving.

Most farm equipment has standard shift. Farm-located handicapped people may, if feasible, prefer standard shift over automatic so they can drive other equipment as well as a car.

The proper position in the car for the driver education instructor on road practice and testing is:

> Stable support for left foot and right arms so right foot for brake and left arm for steering are always free to take over when needed. SEAT MUST BE IN SECURE LOCKED POSITION SO IT DOES NOT SUDDENLY MOVE AT A TIME WHEN SAFETY DEMANDS ACTION OF INSTRUCTOR.

There are 2 words never used in rehabilitation medicine, including driver education for the handicapped, and they are "always" and "never". Each individual's needs, strengths, and deficits gauge action.

Aside from being able to manipulate car controls, whether standard or with adaptations, all driving requires the following:

> Know where you are
> Know where you are going
> Know when to turn the wheel, how quickly and how much
> Generally intact scanning-planning ability

The MENTAL SKILLS NOT NEEDED IN DRIVING include: HEARING (compensated by eyes and extra mirrors); the senses of TASTE and SMELL; the ability to put one's thoughts into words.

The MENTAL SKILLS NEEDED IN DRIVING include: vision (at least 20/40 corrected vision in the better eye) and 160° field of vision; alertness; perception (interpret what is heard, felt, touched, smelled and seen); judgement (to adjust to changing circumstances by using appropriate alternate driving techniques); the ability to understand some type of language (gestures, speech, written words); memory; the ability to visually scan and remember enough of the visual landmarks to drive in the proper place in a street or road, watch out for cars, people, obstacles and animals; respond to stop lights, fire trucks and ambulances, road signs regarding driving changes (construction, etc.); the amazing capacity to understand, remember to do, and perform many highly skilled acts simultaneously and with speed; solve problems; apply what is learned.

An acquired handicap affecting an UNSTABLE person may increase instability and extend and complicate training/time/results; an emotionally well adjusted person may be easily able to compensate for changes imposed by the handicap.

YOUTH needs massive exposure to classroom work and to the responsibilities of driving; the mechanics of driving are likely to be acquired easily.

AGE, already with a sense of responsibility, the need is likely to be for much eye-hand, eye-foot training.

A European adage is that one hour of training time needs to be added for each year of age to master a new skill. (If this is valid, added training time may not only be needed for increasing age but for the handicap as well.)

Consideration of driving training for a handicapped person may need to consider many services before training is started: therapy to improve muscle strength, range of motion, manipulation of controls, transfer from wheel chair to car; psychological counseling; long range financial planning (purchase of a van with a lift, for example, or adaptive equipment, etc.).

LICENSE RESTRICTIONS MAY BE REVERSIBLE because of a return of function, or an increase in diminished function. Where the physical condition is expected to change - remission, regression, improvement - the license should stipulate a realistic review time to replace the usual renewal time.

The New York State Department of Motor Vehicles is working on a test, needed to secure a Learner's Permit, which is all symbols and by-passes the need to read entirely.

There is no safety in economy. CHEAP ADAPTIVE EQUIPMENT IS NOT SAFE.

If adaptive equipment is in a car used both by handicapped and non-handicapped driver, care must be given that adaptive equipment cannot get in the way and cause an accident. There are non-commercially available plates, for example, which can be made to cover the rod from the gas pedal to one adapted for the left foot so accidental acceleration cannot take place.

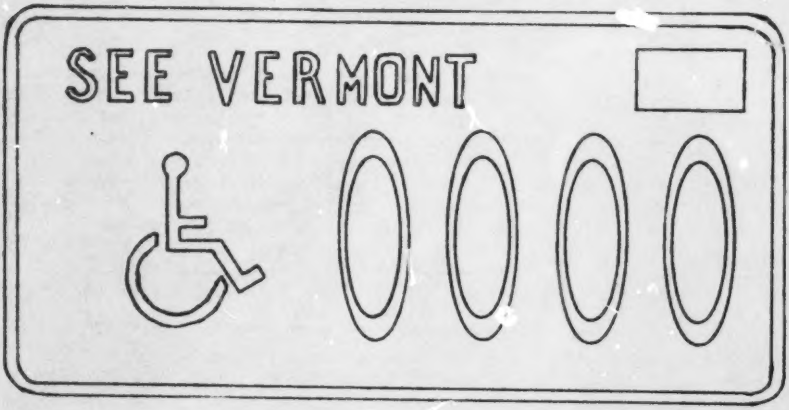
Adaptive equipment needs to be tried to the point of easy driving by the Driver Educator before any attempt is made to teach a trainee in its use. Its basic mastery needs to be mastered in an off street situation by the trainee before road training is attempted.

Until recent federal legislation was passed which related to handicapped Veterans (1975), there has been no attempt on either a federal or state level to test the safety of adaptive equipment available commercially. Likewise, there are no regulations about inspection of its proper installation, its repair or periodic re-inspection. The VA law not only mandates that all handicapped veterans be given the chance to be considered for driving, and training if feasible, but research money was made available to check the construction, safety and wear of adaptive equipment. Just as the Government's findings on hearing aids was made available on the basis of the right to know, so this data on adaptive equipment should be. THEREFORE, UNTIL THIS STUDY IS COMPLETED AND THE RESULTS KNOWN, TOO MUCH THOUGHT AND CARE CANNOT BE GIVEN TO SUITABLE CONTROLS BEFORE A PURCHASE IS MADE. THIS SHOULD BE LEFT TO THE SCREENERS.

DRIVERS WITH HANDICAPS, FACED WITH PROBLEMS ON THE ROAD, may be completely dependent upon others for help. There are 3 possibilities:

1. Citizens Band Radio
2. A "Help" sign with the International Symbol for the handicapped, and made to hang at right angles over the top of the window on the driver's side (available at a reasonable cost from the Governor's Committee on Employment of the Handicapped, 81 River St., Montpelier, Vt. 05602).

3. The special license plate, pictured below which not only invites help, but also permits use of reserved parking places for the handicapped and avoids the need for having to "feed parking meters" to avoid a fine. (The wording on the license may change but the logo for the handicapped will remain as shown below.)



- The attitude of the driver educator is of the essence. If he/she feels uncomfortable in working with the handicapped, unsure, or impatient there should be no hesitancy about requesting that training be done by someone else. There is great need for good rapport between trainee and the driver trainer. The handicap itself presents enough problems without having deep-seated feelings about handicaps on the part of the driver educator or personality problems add still other handicaps.

- The driver educator needs to guard words used carefully being neither optimistic nor pessimistic; supportive and encouraging but not over-protective. There are always uncertainties about the ability to drive right up to the time of licensing examinations!

- Needed timing HAS to be open ended. There should be no push to complete training in a pre-determined time.

- Tires are extra important for the driver who cannot walk. They should be self sealing, puncture proof type so punctures are sealed pending driving to the next service station.

- When car adaptations are made there should be careful consideration of the basic car design from the standpoint of safety lest in an accident it can be proven that the accident was related to the modifications thus nullifying insurance coverage.

- Personality is a big factor in any driver. Added to this, the greater the ambiguity of the stimulus (Examples: Night driving lessens visual clues; rain distorts them) the more the driver's personality manifests itself. Reducing clues normally means the need for extra care. However, some personality distortions prevent this from happening.

- Persons with damage to left side of the brain causing trouble (often paralysis on the right side of the body) may have language/speech problems which are disturbing to trainee and trainer alike, but which may not affect safe driving. However, damage to right side of the brain with resultant possible paralysis on the left side, often causes DISABLING perceptual and personality problems which could affect driving very much.

CONCLUSION

By late winter in 1975, more than half way through the project period, the group was mired down not only with facts already related, but many more about driving reactions, pacemakers, the differing needs of specific handicaps and the realities of Vermont's sparsely spread out population. For example, a Driver Educator, in sparsely populated Essex County, might not see a severely handicapped student in years, or have more than one in the same year. The project was acquiring facts and more facts, but a viable program of Driver Education for the Handicapped in Vermont was not yet even conceived!

A DAY WITH THE N.H. DRIVER EDUCATION CONSULTANT AT CROTCHED MT. REHABILITATION CENTER

Many members of the Planning Committee spent a day getting more facts but the greatest gain of all was that a SYSTEM FOR STARTING a Vermont program evolved from this worthwhile day - using a rehabilitation center for the severely handicapped whose functional abilities to drive were questionned; who might or might not have visual and/or perception problems, who might require further medical review, or need adaptive equipment and/or car modifications or special vans.

This decision became the "cornerstone"of the Vermont plan, actual screening was finally started, forms and systems tested to end up with what is fully described in the balance of this manual. The project time had to be extended for another year, and because of the realities of time limitations of screeners, and travel distances as well, a southern Vermont based Screening Site, the Vermont Achievement Center in Rutland, was added to the original site at the Department of Rehabilitation Medicine, Medical Center Hospital, Burlington.

Basically, the benefits of having Screening Sites are many:

- The occupational and physical therapists have the skills needed to both assess functional abilities and to recommend or even design compensatory equipment such as key holder for a person unable to hold and use a traditional car key.

- Vision screening, a rigid standard in the Motor Vehicle regulations, is included. This familiarizes persons with a test they will need to take later on, and shows if a medical opinion or intervention is necessary.

- The responsibility for checking the ability to manage car controls, and an initial review of a trainee's responses to the unexpected happenings in driving is centered in a few Driver Educators at each Screening Site.

- Likewise, it is the responsibility of these same Driver Educators, working with the therapists to decide on adaptive equipment and car modifications. They can follow new developments easily; their

greater experience, than any local Driver Educator could have, would be passed on both in their specific recommendations, and their telephone availability to answer baffling questions which the local Driver Educator might have. (A consultation visit would need to be pre-arranged and billed as an extra cost.)

- The screening findings, a copy of which would go to Motor Vehicles, could avoid delays by eliminating the need for medical review, or by greatly adding specific data if a medical review via Motor Vehicles is indicated.

PROJECT SUGGESTED MOTOR VEHICLE REGULATIONS

With the passage of time and the acquisition of knowledge which defined the infinite complexities of driver education for the handicapped, the Planning Committee concurred with the Commissioner of Motor Vehicles in keeping regulations to a minimum, and in building safeguards into the program itself as a substitute.

The following suggestions were made to Motor Vehicles by the Planning Committee:

- Driver Education for the Handicapped is in a strong position to supply Motor Vehicles with factual data to document the need for required periodic re-examinations for all drivers, an area in which their past legislative efforts have been unsuccessful.

- There are some legally blind Vermonters, mostly older people who drive because their home locations demand it to meet the basic needs of living, and who fail to apply for a needed aid to the Disabled Grant lest application cancel their driving privileges. It was hoped that indepartmental action between Motor Vehicles and the Division for the Blind and Visually Impaired might result in the provision of medical care and/or optical aids to improve vision so driving would be possible, or some alternative plan for meeting basic needs if driving was found to be unsafe.

- With many school children with language problems the test for the Learner's Permit, whether read or presented orally, could prevent driving. It was suggested that the Vermont Speech and Hearing Association, composed of accredited Speech Pathologists and Audiologists, be approached to study the Motor Vehicles Manual in order to devise an alternative method of learning the needed data and demonstrating that these persons with language problems have understood and retained the laws of the road and the meaning of signs.

- Until the VA completes research on adaptive equipment, and Vermont's program has had extensive experience, it was recommended that Motor Vehicles require that any car equipped with controls needed for a handicapped person shall have all connections and installation sites tested for security both for the safety of the handicapped driver and anyone else using the same vehicle.

- To avoid duplication of effort, and physician contacts both by Driver Education for the Handicapped and Motor Vehicles, it was suggested that Screening Sites notify Motor Vehicles of persons with screening appointments. Motor Vehicles, then, would delay any further action pending receipt of the Screening Findings and Recommendations. If the screening showed driving should not be considered, no application would be sent to the person's physician by Motor Vehicles; with

repeat screening, this process would be followed again. If driver education was considered feasible Motor Vehicles would then send their form to the person's physician.

IN-SERVICE TRAINING ON HANDICAPS FOR DRIVER EDUCATORS & MOTOR VEHICLE INSPECTORS

At the conclusion of this project's first workshop one School Driver Education Instructor said: "The basics of Driver Education for the Handicapped were beautifully covered but we weren't ready even for the basics!". Questionned further, terminology used was not understood, and neither were basic facts about handicaps.

In another Title III project, under the direction of the Director of this project, "Vocationally Oriented School Planning for the Handicapped" this same need was found among all school personnel with the possible exception of school nurses. A manual, revised after testing and sent to Superintendent in all Vermont school districts, has suggestions for In-Service Training including books to study, movies, panels of persons with handicaps, and simulation exercises to allow a Driver Educator to experience different"handicaps" The time needed for each activity is given in case re-certification credit is desired.

A companion manual, "Building Needs for the Handicapped", available from the Superintendent, Guidance Counselors and School Nurses, describes what is needed to make buildings accessible to persons with different functional handicaps. This relates to driver education in parking areas, surfaces between a parking area and the building for which it was provided, entrances, etc.

Vermont's very recent laws regarding special parking areas, giving help to a person with the special license plates, and laws regarding barrier free buildings are rarely understood by people unfamiliar with the special needs which different handicaps require. Therefore, signs still are disregarded and drivers needing help are often by-passed. School Driver Education Classes are an excellent place to educate the citizens of the future in this vital area - 22 million persons in the country whose access to and use of buildings is restricted by building barriers!

SOMEDAY, EVEN ONE OF THE STUDENTS OR A DRIVER EDUCATOR WHO LEARNED ABOUT THESE SPECIAL NEEDS MAY BECOME HANDICAPPED BY A CAR, SNOWMOBILE, TRAMPOLINE, HANG GLIDER, MOTORCYCLE OR SKI ACCIDENT!

In-Service training makes no experts of anyone. Instead it exposes people to the impact of handicaps on different people, and to the infinite variables among handicaps superimposed upon people with all of their infinite variables. It does, indeed, ready a person "FOR THE BASICS" of work with a person who has a handicap.

MEDICATIONS, DRUGS & SAFE DRIVING

Anyone old enough to be considered for driving should be old enough to know what medications he or she is taking, and if there might be side effects which in any way IMPAIR JUDGEMENT because of their effect on the central vervous system by causing excitability or drowsiness. If this is not known, the person asking for the PRIVILEGE to drive should make this determination before any road training is attempted. Also, the general public is well aware of the potentially hazardous effects of drugs (mind altering ones as well as alcohol) on central nervous system functioning.

For the protection of trainee and trainer alike, the Driver Educator would do well to ask the trainee if he or she is taking any doctor prescribed or self prescribed medications or drugs with the explanation that impaired judgement caused by either excitability or drowsiness could cause an accident.

If the trainee is taking medication(s) prescribed by a doctor or self prescribed, and does not know if a side effect could affect judgement and/or the quick responses needed to avert disasters in driving, it is reasonable to request that the trainee secure this information. This could be done in one of two ways for either a minor or an adult:

1. MINOR - If trainee is a minor, parental consent IN WRITING would be needed for the Driver Educator to make this inquiry from the trainee's physician.

   or

   The Driver Educator could put in writing the question needing an answer prior to road training so the parent/guardian could secure this information in writing from the physician for the Driver Educator.

2. ADULT - The trainee could sign a consent for the Driver Educator to contact the doctor about possible side effects of medications given.

   or

   A comparable plan to the alternative in #1 above.

Another equally important aspect of medication is whether or not the medication is ALWAYS TAKEN AS PRESCRIBED. This is exceptionally important in conditions related to impairment in consciousness if medication is forgotten.

LEFT

Testing visual skills before making screening recommendations might indicate need for eye specialist review, show no problem or one well corrected with glasses, or determine motor vehicle regulations could not be met.

RIGHT

A dynamometer is used to measure the strength of grip

Control panel of Essex Junction simulator records each test driver's responses to actual road conditions pictured on wall-to-wall screen at end.

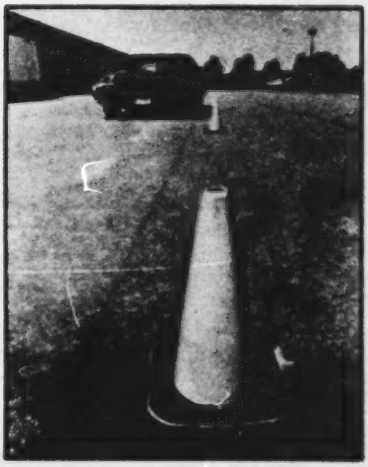
MIDDLE LEFT

Shows one station in stimulator equipped with hand controls and with the potential for trying steering devices if needed, screen at end. Basically simulator used before in-car screening to learn about manipulation of car controls and need for compensatory equipment.

(VAC, for Southern Vermont, has a custom made steering simulator for the same purposes.)

Both offer information before starting a car.

RIGHT



Here, in in-car screening, rubber traffic cones are used off-street to test scanning, planning and turning at proper time to avoid "obstacle".

Rubber traffic cones may also be used to mark range for perception testing described on pages 26 and 27.

DRIVER EDUCATION PLANNING FOR THE DISABLED

One of the most critical parts of Driver Education for the handicapped is in assessing each potential trainee, and making suitable plans to meet the special needs of that individual. There are 3 "CONSTANTS" in this process:

1. Each student is unique
2. Each must pass the Learner's Permit test whether in writing, orally or in some yet to be devised more concrete form to by-pass language barriers.
3. Each must DEMONSTRATE the judgement, perception, the ability and flexibility to change strategies in seconds when something unexpected in the driving environment is altered and a change must be made to avoid an accident; each must have the needed manipulative ability either with or without compensatory BUT SAFE devices.

Added to these "CONSTANTS" there is the added need to pocket pity and compassion, lest this allow exceptions not conducive to safety; to make sure every compensatory consideration has been considered if skills basic to safe driving are intact. THEREFORE DEFINITION/ASSESSMENT/PLANNING are needed at the start once a person with a handicap has been referred to Driver Education or asks to be considered.

THE PROCESS OF DEFINITION/ASSESSMENT/PLANNING

1. GET FACTS ABOUT THE HANDICAP (In this adults will be omitted because it is suggested they make their initial planning via a SCREENING SITE.)

   There are many sources - the student, parent(s)/guardian, Guidance Counselor, the School Nurse, the classroom teacher or special educator, the student's permanent record form. Beyond this, if data is adequate for the Driver Educator's unique needs, it is possible to copy the form "OBSERVABLE SCHOOL SKILLS" found in the manual with the red cover, available through the Superintendent of Schools, entitled "Vocational Planning for the Handicapped". Inquire from the teacher if this form has already been filled in. If not, a teacher could fill one in quickly. Another form in that same manual "Functional Self Assessment" could be filled in by the student with a little adult encouragement if the teacher lacks the time or feels inadequate about filling in the other form.

2. The following, based upon those facts, should help you sort out the students who will need outside help from those who may not.

   APHASIA - There may be very few students in Vermont with the problem of aphasia which means they have trouble either interpreting what is heard to act appropriately, or trouble putting their thoughts into words. If there is a speech therapist in the school who knows the student, learn more about the problem. There may be a real problem driving or the inability to drive for the person unable to act appropriately on what is heard (Receptive Aphasia), while the inability to put thoughts into words easily (Expressive Aphasia) may present no problem to safety, but possibly some in taking the Learner's Permit test.

safest thing to do would be to refer for SCREENING and say when the referral is made that a Speech/Language Evaluation is needed since this is not a routine part of screening but CAN BE ARRANGED, IF THE NEED IS KNOWN AHEAD, in either Screening Site.

DEAF - A car must be equipped with an outside as well as an inside rear view mirror but aside from this the real problem is communication for the training itself and for the Learner's Permit test. As noted before, it is hoped that the Vermont Speech and Hearing Association may be approached to develop a test (possibly with toys and simulated traffic situations and/or pictures) so these people who have the capacity for safe driving may do so.

The majority of deaf teenagers learning to drive attend the Austine School in Brattleboro and have their Driver Education through the program at Brattleboro High School. Being able to sign/finger spell, or having someone who can, is essential for both the training and the Learner's Permit test.

For others not at Austine, referral for SCREENING is indicated but again with the special request for advice about communications made at the time of referral so this can be arranged.

(Some deaf persons also have other handicaps so it is essential to get data about all of their handicaps and their abilities and not assume that the lack of hearing is the only focus of Driver Education.)

EMOTIONAL PROBLEMS - Some schools have Mental Health Consultants. Most areas are covered by Mental Health Services. First it is necessary to learn if the student is having therapy or any type of service. Parental permission IN WRITING is needed if the Driver Educator needs to talk with the person familiar with the student who has emotional problems to get guidance on learning to drive. If driving is not indicated, the student could always be considered later if the emotional problem is reduced. A flat "no" is upsetting; possible future reconsideration offers the needed hope anyone wants.

INVISIBLE HANDICAPS - Paralysis, amputation, strabismus show. Handicaps, especially those involving the central nervous system, often do not. These may be the critical ones needed to drive - personality distortions, the inability to act quickly on what is seen or heard, judgement, etc.

If facts were carefully collected, PERCEPTION TESTING, described later in this section, could be of great help. Role playing in an imaginary car could help by stimulating driving happenings and getting the student's responses or planned action to the situation simulated. This could be done with trainee and trainer each having cars and with large sheets of wrapping paper marked out with different curves, crossings, cloverleafs, parking places, etc. If this tests well, road testing

might be off street first and then in the least congested area.

CAUTION IS THE SAFEST APPROACH

LEARNING PROBLEMS - These persons could be learning disabled, or with overall depressed mental ability. Many would have a tutor, use a Resource Room, or be in a special class. When this is so, the special educator might cover the classroom work in preparation for the Learner's Permit test, and also guide the Driver Educator in teaching approaches which work best.

Some may need to have each skill broken down into its component parts with focus on one at a time before mastery, and repetition of the mastered skill along with work on another. Others may need extra one-to-one attention.

If the school lacks Special Educators or resources, the Division of Special Education (Their consultant to the Driver Education for the Handicapped Program) should be contacted. Driver Education in the State Department of Education has some curriculum guides for the retarded student developed in other states, plus a revised Motor Vehicles Manual in a low level vocabulary.

MEDICAL PROBLEMS - Commonest among them would probably be epilepsy, heart conditions and diabetes. Their serious connection to driving, without proper medical control, could be changes in consciousness. Less frequent are conditions like hemophilia, cystic fibrosis, arthritis, etc.

Again getting all of the facts about the problem, medications, episodes of trouble, diet requirements, and safety to consider driving all need to be explored.

NEURO-MUSCULAR DISORDERS- These are conditions in which some part of the nervous system is effected resulting in the interference of normal use of muscles and control of motion. Some are congenital (present at birth); some acquired from accident or disease; some are chronic; some may become progressive but with good medical care followed carefully by the patient remain fairly static; others are steadily progressive; still others, progressive with periods of remission, unrelated to treatment, when there seems to be improvement be it only transient.

Spina bifida, cerebral palsy, strokes (which may come at any age, including childhood, but are commoner among older people), muscular dystrophy, polio, spinal cord injuries, brachial palsy are conditions commoner to this group.

Referral for SCREENING is suggested for all in this group because muscle strength, normal movement in all directions

at joints, muscle spasms, other problems related to the condition, etc. must all be evaluated both for the functional capacity to drive and the possibility of mechanical compensations if driving seems feasible.

PERCEPTION
PROBLEMS (NOTED IN CLASSROOM) - Jiri Sipajlo, Assistant Professor of Driver Education at New York University's Institute of Rehabilitation Medicine, the workshop leader for all of this project's workshops, advises that it would be ideal if everyone, irrespective of handicap, have the following IN CAR BUT OFF STREET TEST before any road training is considered at all. This is ESSENTIAL for any student who shows right-left confusions, scrambles directions, bumps into things, breaks things not from carelessness but from not being able to gauge distances, is generally poor at scanning to place body beyond obstacles, etc.

PERCEPTION TESTING IN A CAR

SITE: An open space twice the width of the radius of the car's full turn; the length, double the width. The boundaries could be marked off with stakes and string or rope, rocks or portable painted rubber traffic cones.

PREPARATIONS: A toy car could be used in a dress box cover (the "range") to demonstrate what the trainee is expected to do. Each exercise may be comprehended quickly or take up to 1 hr. of preparation time.

RATING: In order to be judged successful, the 2nd and 3rd of 3 consecutive trials must be done correctly.

If there are less than 2 successes, the trainee is shown what he/she did and is suspended from further attempts at Driver Education for 6-8 months before being allowed to repeat the test.

RELATION OF TESTS TO DRIVING: The combination of these tests cover skills ABSOLUTELY BASIC TO SAFE DRIVING:

1. Know where you are
2. Know where you are going
3. Know when to turn the wheel and how much to get to where you are going
4. Generally intact planning/scanning ability

THESE EXERCISES TEST ALL OF THE BASIC DRIVING SKILLS - SCANNING, PLANNING, TURNING AND BACKING. IF A PERSON CANNOT DO THEM, HE/SHE SHOULD NOT CONTINUE WITH DRIVER EDUCATION UNLESS SUBSEQUENT REPETITION SHOWS SUCCESS AS EXPLAINED.

TESTS

1. Drive around the outer edge of the range 3 times to the left; then 3 times to the right.

2. Drive in a circle 3 times to the left; 3 to the right.

3. Drive in a figure 8 three times to the left; 3 to the right.

4. Back up straight, return to the starting position and repeat twice more.

5. Back to the middle of the left side of range; to the middle of right.

In these exercises, at different times, have the driver stop. Can the driver continue to complete the exercise, or is it necessary for him/her to start over from the same starting point? (Traffic demands many interruptions in driving patterns so this is a vital skill for safety.)

If you think the driver is using thinking rather than visual scanning skills to carry out these exercises, reduce the size and direction of the 8 (Exercise #3) and see if he/she can succeed quickly.

PERSONS NEEDING SCREENING AT EITHER OF SCREENING SITES

1. Anyone whose functional ability to drive is questionned by parent(s)/ guardian, driver educator, teacher, special educator, guidance, etc.

2. Anyone who may require car modifications and/or a special vehicle in order to drive (This could be a wheel chair user, an abnormally short person or one with abnormally short arms or legs, or even an abnormally tall person).

3. Anyone with questions about vision (acuity, visual fields, strabismus, etc.).

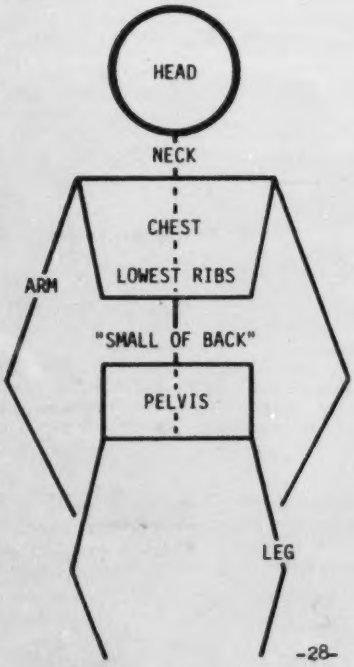
4. Anyone who is likely to need adaptive equipment in order to drive (amputees, wheel chair users, paralyzed persons).

5. Anyone with suspected problems in perception if local Driver Education lacks the time or space for the tests in perception given above, or has questions about rating performance.

6. As mentioned before, a person with aphasia or deafness for whom the Driver Educator needs guidance in planning.

(Screening Application form, Screening Findings form, and Screening Recommendations report form are shown in later pages.)

BODY SCHEMATIC IN RELATION TO HANDICAPS



HEAD - *Area critical to emotions, personality, thinking, perception, consciousness, motor control, automatic functions of breathing, eye blinking, swallowing, heart action, position sense & co-ordination adjustment. Skull offers some protection.*

NECK - *Poorly protected area inviting whiplash, & spinal cord injuries from diving, car & other accidents.*

CHEST - *Better protection than neck. Important because of site for heart action & breathing.*

"SMALL OF BACK" - *Another poorly protected area inviting fractures & possible spinal cord injury in accidents.*

ARMS & LEGS - *Fractures, amputations, deformities, & spinal cord or head injuries may affect function slightly to completely.*

SKELETON - *Offers rigidity for postures; protection of vital areas.*

MUSCLES & TENDONS - *Directed by brain (or spinal cord for reflex actions), all motions, including balance and strength, possible short of injury, disease or deformity.*

BLOOD SYSTEM - *Keeps body working by supplying oxygen and nutrients.*

VERMONT'S PROCEDURES ON DRIVER EDUCATION FOR THE HANDICAPPED

1. EVERY STUDENT WITH A HANDICAP HAS A RIGHT TO BE CONSIDERED FOR DRIVER EDUCATION AS FAR AS THE SCHOOL IS CONCERNED.

   - A brochure should be sent to the parent(s)/guardian to study and then an appointment set to get their consent in writing, or their refusal.
   - If there is refusal, nothing further can be done during the student's minority.
   - There might be a physician's statement that driving is not safe due to a medical problem related or not related to the parent's refusal.

2. Assuming that the parent(s)/guardian did sign, and that there was no statement against consideration of driver training by a physician, then the process, described before under "Process of Definition/Assessment/Planning would be followed to prepare for Driver Education.

3. Regardless of whether there is screening outside of the school or special training within the school (beyond the usual driver training to which every student, including the handicapped,is entitled), triplicate forms must be sent to Driver Education in the State Department of Education defining the need and seeking approval before any training is started. (This would be Form #1 found later in the booklet together with other forms. The Form # is found in the lower right corner of each form.)

4. The State Department of Education would return 2 of the 3 like forms sent them denoting approval or its lack and the reasons. One of the forms is to be kept in the student's Driver Education Record; the other, reserved for Screening if such is needed. If there is approval, the following would then take place:

FOR STUDENTS NEEDING SCREENING

The triplicate approval form will constitute a referral to the screening site nearest the school (or the other site if parents request same). Such screening site will then mail an application form (Form #2) to the Driver Educator listed on the form. It will be his/her responsibility to see that the form is completely filled in, signed by parent(s)/guardian and the physician, and then returned to Screening Site. THE EXPERIENCE OF THE PROJECT INDICATES THAT ACTIVE FOLLOW-UP IS NEEDED EITHER BY DRIVER EDUCATOR, GUIDANCE OR SCHOOL NURSE TO HAVE FORM FILLED IN. THIS APPLIES EVEN WHEN THE REQUEST COMES FROM THE PERSON WANTING TO LEARN TO DRIVE.

Within a week of receipt of the COMPLETELY filled in form the Screening Site will send an appointment to the Driver Educator so the school can help the family arrange for transportation and see that the appointment is kept. The Screening Site will notify Motor Vehicles on Form #3 that the student will have screening.

Once the appointment has been kept, the screening findings and recommendations will be sent to the parents (or student if 18 yrs. or

over), the physician, Motor Vehicles and the Driver Education Instructor, and the Consultant on Driver Ed., State Dept. of Ed. (Forms 4 & 5).

It is the responsibility of the Driver Educator together with the family to carry out the recommendations made. If there are questions the telephone number for either Screening Site is on this manual's copy of the Application for Screening form, or questions may be put in writing and sent c/o Driver Education for the Handicapped at the Screening Site, or the request for a consultation made if essential.

If loan equipment is recommended, this can be borrowed from the project's loan supply housed at the Vermont Achievement Center, 88 Park St., Rutland 05701. The easiest way to manage this is to xerox the Screening Findings and Recommendations (Forms # 4 & 5), unless done at VAC, and ask for the loan of equipment for trial and training. A postal card (Form #6) will be sent (or supplied) with loan equipment which must be filled in and returned as soon as equipment is received.

IT IS WELL TO TELL PARENTS OF STUDENTS NEEDING ADAPTIVE EQUIPMENT, CAR MODIFICATIONS, AND/OR A SPECIAL VEHICLE THE FOLLOWING:

1. The project may loan adaptive equipment only for trial/training.
2. Motor Vehicles Regulations state if they are needed the final Driver's License Test must be given in the car which will be used out of school with adaptive equipment installed and owned by the person tested. (Sometimes insurance, in case the handicap was caused by an accident, will meet these costs, or Vocational Rehabilitation if they are working with the student, or a service club.)
3. Aside from Veteran's Administration, there is no known source of financial assistance on a van or special vehicle.

FOR STUDENTS NOT NEEDING SCREENING

Plans, resulting from what was learned from "Process of Definition/ Assessment/Planning" would be implemented. If progress is lacking, consultation with local school personnel working with the student would be in order after writing down the teaching approach used, if any of it seems to work, and where it fails. The purpose of seeking help would be to find out if the system is at fault, and if a different teaching approach might work. If the revised teaching approach still does not result in the needed learning/application, the student could be furloughed from Driver Education until the next year in order to grow up more. This should not be done until there has been sufficient one-to-one attention to convince Driver Educator that there has been a fair trial of different teaching approaches - concrete, if there is mental slowness, even to using toy cars and a paper marked with different road situations; or sitting in a car learning how to manipulate one control at a time and then in the car manipulating that one control as the Driver Educator manages the others OFF STREET; or breaking down each skill into its many component parts; or demonstrating each skill several times before the student is expected to act. Failures should not be hidden, but neither should the student be made to feel he/she is a failure. Perhaps driving will not be feasible nor safe but this decision should come only after a fair trial(s). RARELY SHOULD A TRAINING SESSION EXCEED 1½ HRS. THIS NEEDS TO BE FLEXIBLE AND ADJUSTED TO THE ATTENTION SPAN AND TOLERANCE OF THE STUDENT.

Bills on Form #7 should be submitted to the Driver Education for the Handicapped, State Department of Education, State Office Bldg., Montpelier 05602 monthly. This should be only for the extra time spent, and not for the basic driver education instruction provided for all students 15 yrs. or older. (See Costs for help in billing.)

If the student had to be furloughed into the next school year the State Dept. should have a copy of the report which has been put in the student's record briefly listing training approaches used, consultation sought, and results which led to furlough. When Driver Education is planned for the next year, form #1 should be sent to the State Dept. again before training starts.

If the student is furloughed for a few months, but within the same academic year because he/she is finishing school that year, the furlough could be noted on the bottom of the bill, and Driver Education resumed without sending in another application for extra funds. The Consultant on Driver Ed. for the Handicapped in Special Education SDE should be consulted to learn if there is another approach, beyond the ones tried and failed to bring success, which might be used when Driver Education is resumed.

If the student passed the ROAD TRAINING, the following procedures need to be followed:

- Unlike other students who, together with their families, manage the Motor Vehicles examination on their own, students with handicaps need Driver Educator help through the licensing process. Before the appoint time, contact by the Driver Educator with Motor Vehicles is essential to explain the handicap, and if screening was done, allow the Regional Motor Vehicles Office to secure Screening Findings and Recommendations from the State Office if they do not already have it. For a person in a wheel chair, transfer is sometimes slow. Motor Vehicles Inspectors have tight schedules so transfer should be done before the Inspector starts to save time. In the instance of a deaf person who signs, an Interpretor who signs should be available for the examination.

  As has been stated before, if CAR MODIFICATIONS, A SPECIAL VAN/VEHICLE (such as one with all power equipment), and/or ADAPTIVE EQUIPMENT were advised, the Motor Vehicles examination should be postponed pending getting the vehicle to be used, modifications made, and/or adaptive equipment installed.

Follow-up, routine with other students, needs to be extended for the new driver with special needs. A ride with the student should be done in different traffic situations. When winter comes and road surfaces change again there should be follow-up. If there are problems, further training should be given. If done in a different academic year, another approval form should be filled in for the State Dept. before training is initiated.

WHILE IT MATTERS GREATLY FOR A PERSON WITH A HANDICAP TO BE ABLE TO DRIVE, IT MATTERS EVEN MORE TO THAT DRIVER AND TO ALL OTHERS THAT HE/SHE SHALL BE ABLE TO DRIVE SAFELY IN ALL KINDS OF SITUATIONS. ONLY FREQUENT FOLLOW-UP WILL ASSURE THIS.

FORMS

Forms are action facilitators. If used consistently they are clear and easy for all.

Forms will be supplied to LOCAL DRIVER EDUCATORS for this program at the start of each year and upon request when the supply is depleted from Driver Education for the Handicapped, State Department of Education, State Office Building, Montpelier 05602, Telephone 828-3115.

The only forms which will not be supplied to schools are Forms #2, 3, 4, 5, 6 relating to screening and loan equipment. These will be kept only at the Screening Sites so if changes are ever needed the old forms will be destroyed and only the desired ones used.

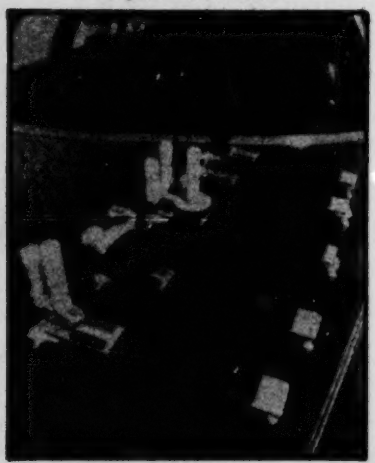
Forms must be filled in completely in order to get desired action. For example, if the application for screening is not signed by a parent, if data regarding a car, or if the doctor's signature is not there, there can be no screening. Likewise, if a bill for extra Driver Education time is not completed, the check for services cannot be paid.

DUPLICATE FORMS, kept in a handicapped student's record form written proof of what action has taken place. They are the Driver Educator's proof that care has been taken and suggested procedures followed. THEY CAN BE COMFORTABLE IN THE SECURITY THEY OFFER RATHER THAN BE A NUISANCE.

Forms in use often demonstrate short-comings which were not obvious to the people developing them. If you have suggestions, Driver Education for the Handicapped in the State Department of Education would welcome your suggested written revision of any form used in the program.

STEERING DEVICES

Out of the many available, five are pictured below.



Steering device in use for right hand; hand control, for left hand, visible lower left from steering wheel.

DRIVER EDUCATION FOR THE HANDICAPPED

APPLICATION FOR ANTICIPATED EXTRA FUNDS

(NOTE: Form to be filled in in triplicate, all copies sent to Driver Education for the Handicapped, State Department of Education; 2 copies showing approval, or its lack and with reasons, will be returned to the original sender to become a permanent part of this student's Driver Education record; extra copy for screening site referral if screening is needed.)

NAME OF STUDENT _____ BIRTHDATE _____
(MONTH)(DAY)(YEAR)

HOME ADDRESS _____ ZIP CODE _____

NAME OF PARENT/GUARDIAN _____ TELEPHONE ___ ___ ____

DRIVER EDUCATOR _____ HOME TELEPHONE ___ ___ ____

NAME OF SCHOOL _____ SCHOOL TEL. ___ ___ ____

ADDRESS OF SCHOOL _____

The above named student has special needs related to a _____
(use category listed under Definition/Assessment/Planning)
handicap. It is anticipated, based on initial assessment, that the services which are checked may be needed:

___ SCREENING AT DEPT. OF REHAB. MED. BURLINGTON ___ or VAC Rutland ___

___ EVALUATIONS BEYOND USUAL SCREENING SUCH AS SPEECH & LANGUAGE ___
HEARING ___

___ OUT-OF-SCHOOL TIME FOR DRIVER ED. TO VISIT DOCTOR IF PARENTS SO AUTHORIZE

___ PERCEPTION TESTING IN OUT-OF-SCHOOL TIME

___ EXTRA ROAD TRAINING ON ONE-TO-ONE BASIS

___ OUT-OF-SCHOOL TIME FOR DRIVER ED. TO OVERSEE INSTALLATION OF ADAPTIVE EQUIPMENT

___ TRANSPORTATION TO SCREENING SITE IF PARENT/GUARDIAN UNABLE TO PROVIDE

___ CONSULTATION WITH SCREENING SITE PERSONNEL RE: ADAPTIVE EQUIPMENT, CAR MODIFICATIONS, OR ANYTHING UNCLEAR ABOUT SCREENING (FOR CONSULTANT AND DRIVER EDUCATOR)

OTHER (Describe) _____

_____

ESTIMATE OF EXTRA COST BEYOND USUAL PER PUPIL ALLOTMENT FOR DRIVER EDUCATION (Refer to COSTS in Manual) _____

_____

MINOR - THE PRECEDING DESCRIPTION OF NEEDED SERVICES HAS MY(OUR)APPROVAL

NOTE: If student lives with both parents, both should sign; if with one, the one who has custody. If neither the guardian.

FATHER _____

MOTHER _____

GUARDIAN _____

ADULT - 18 yrs. or over THE PRECEDING DESCRIPTION OF NEEDED SERVICES HAS MY APPROVAL Signed by Student _____

DATE SENT TO STATE DEPARTMENT OF EDUCATION _____

ABOVE REQUEST APPROVED BY _____

NOT APPROVED BECAUSE _____

_____

_____

_____

DATE RETURNED TO SCHOOL BY STATE DEPARTMENT OF EDUCATION _____

FORM #1

APPLICATION FOR SCREENING - DRIVER EDUCATION FOR THE HANDICAPPED

FROM: NAME _____ ENCIRCLE: SCHOOL AGENCY PROFESSIONAL DISABLED PERSON

ADDRESS _____ TEL.# _____

FOR: _____SOUTHERN VERMONT - Vt. Achievement Center, 88 Park St., Rutland 05701 Tel.775-2395
_____NORTHERN VERMONT - Driver Education for the Handicapped, c/o Department of Rehabilitation Medicine, Medical Center Hospital, Burlington 05401, Tel.656-2750

(NOTE: There are no fixed boundaries for north and south. Instead, the two sites for screening were set to avoid delays in screening appointments, reduce travel, and offer proximity of driver education instructors to especially trained screeners should a problem arise on which help is needed.)

NAME OF PERSON NEEDING SCREENING _____ BIRTHDATE _____

PARENTS (If a minor) _____

HOME ADDRESS _____ TEL.#_____ OR MESSAGE TEL. _____

REASON(S) FOR REFERRAL
_____ To drive to school _____ To drive to work _____ To drive for pleasure

VEHICLE USED
_____ None available
_____ Family car)
_____ Own car) described opposite

IF THERE ARE MODIFICATIONS IN VEHICLE USED, PLEASE DESCRIBE _____

_____ van
_____ van with hydraulic lift
_____ standard size
_____ compact
_____ 2 door
_____ 4 door
_____ station wagon
_____ truck

_____ power steering
_____ power brakes
_____ power locks
_____ power windows
_____ power seats
_____ automatic shift
_____ stick shift

TESTING/DRIVING SITUATION
_____ Driver's License currently in force; _____ Date for renewal; _____ # years of driving experience
_____ No license now but had one in _____ (year)
_____ Has driven car with licensed driver but never had training or testing
_____ Has Learner's Permit
_____ With restrictions as follows: _____
_____ Without restrictions
_____ Had class and road training
_____ Failed test in _____ (date)
_____ Never took test
_____ Had class work but never took test for Learner's Permit
_____ No training or driving experience

FINANCES (Costs total $30.00-$60.00 for complete screening, the doctor prescribed Occupational and Physical Therapy Evaluation of which may be paid by medical insurance(s) which cover out-patient care. Driving screening @$10.00 per hour. For people having care under Vocational Rehabilitation Div. there may be some help in paying non-insurance-covered costs.)

CHECK HOW BILLING SHOULD BE ARRANGED: _____ Self; _____ Parent(s); _____ Insurance; _____ Voc. Rehab. Div.; _____ School Driver Ed. SDE
_____ OTHER (Describe) _____

DATA RE: ANY INSURANCE(S) WHICH COVER OUT-PATIENT CHARGES (Name of policy holder, insurance company, address, serial # and instructions for billing)

FORM #2 (Front Side)

PARENTAL CONSENT FOR A MINOR

MY (OUR) SIGNATURE(S), LISTED BELOW IN THIS SECTION, GIVES PERMISSION FOR THE FOLLOWING:

1. Willingness to have _____ (minor's name) scheduled for the special screening, set up for persons with handicaps, to determine if driver education should be considered.
2. To have the physician, listed in the section at the bottom of this page, fill in all information in that section.
3. To have the report of screening findings and recommendations sent to me (us), the physician listed, the agent listed as making the referral on the other side of this form, the Department of Motor Vehicles, and to Driver Education, State Department of Education.

SIGNED _____ AND _____ DATE _____
WITNESS _____ ADDRESS _____

CONSENT BY ADULT SEEKING SCREENING

MY SIGNATURE, LISTED BELOW IN THIS SECTION, SIGNIFIES MY CONSENT FOR THE FOLLOWING:

1. My willingness to have appointments made, and related t my handicap(s), to determine if driver education should be arranged.
2. To have the physician, listed in the section at the bottom of this page, fill in all data in that section.
3. To have the report of screening findings and recommendations sent to me, the physician listed on this form, the referring agent listed on the opposite side of this form, the Department of Motor Vehicles, and to Driver Education, State Department of Education.

SIGNED _____ DATE _____
WITNESS _____ ADDRESS _____

PHYSICIAN OF STUDENT/ADULT NEEDING SCREENING

This pertains to the student/adult listed above who, because of a handicap, needs to have screening examinations in a medically oriented setting to determine if driver education should be attempted. Part of the screening, the part relating to motor function, strength, range of motion, perception, vision, reaction time, etc., is done in a rehabilitation setting in Burlington or Rutland where personnel have the necessary skills. The other part is done by a driver educator trained to observe manipulation of car controls and the response to the changing situations in driving, decide on car requirements and, if needed, the type of adaptive equipment. If this results in the recommendation for driver education, it would be given by a school driver educator, a commercial firm or the driver ed. screener dependent upon need. When there is readiness, and the usual training time may need to be greatly prolonged over the usual, final determination about the ability to drive is determined by the Motor Vehicle Inspector as it is for any citizen. The purpose for these procedures is to give any handicapped person, regardless of the severity of the disability, the opportunity to be considered for driving since it offers the independance to drive to school, work, church, to shop, have medical care, or social use. With today's power equipped cars together with automatic shift, driving is now a possibility for most. The nationwide safety record of the handicapped is exemplary!

THE FOLLOWING INFORMATION IS NEEDED TO PLAN THE SCREENING EXAMINATIONS:

DIAGNOSIS OR DESCRIPTION OF HANDICAP:	CONDITION IS
	____ CONGENITAL (present at birth)
	____ ACQUIRED (accident, illness, unknown causes)
	____ STABLE (unlikely to change)
	____ UNSTABLE
	____ Worsen
	____ Improve

On separate sheet, stapled to this, please describe any medical, behavioral or emotional problem which you consider might require a restriction of driving privileges (passenger car only, no night driving, no driving in traffic, etc.); or for a progressive problem; a repetition of motor vehicle examination at intervals set by you; or a condition which would make driving unsafe (such as lapses of consciousness, severe muscle spasms, unpredictable behavior, or medications which might dull alertness, etc.).

My signature attests to my willingness to have _____ considered for a medical/driving screening to determine if driver education should be considered.

SIGNED _____ ADDRESS _____ DATE _____
WITNESSED BY _____

FORM #2 (Back Side)

THERE IS A SAFE WAY FOR EVERYTHING!

PICTURED ARE CRUTCH WALKER'S PROCEDURES FOR ENTERING CAR, STORING CRUTCHES, AND GETTING OUT OF CAR WITH SAFETY.

SEQUENCE AND LEGEND

1. (LEFT) and 2. (LEFT MIDDLE) Getting in.
3. (RIGHT MIDDLE) Retrieving self-stored crutches from behind seat.
4. (LEFT BELOW) Secure exit from car.
5. (RIGHT BELOW) Ready to take off.

DRIVER EDUCATION FOR THE HANDICAPPED
MOTOR VEHICLES NOTIFICATION of SCREENING

(Original and 2 copies with Original and one copy to Vermont Motor Vehicles Dept., State Office Building who will forward one copy to Regional Office nearest student's home address; 2nd copy will remain in Record at Screening Site).

FROM: _____ Dept. of Rehabilitation Medicine, DeGoesbriand Unit, Medical Center Hospital, Burlington 05401
or _____ Vt. Achievement Center, 88 Park St., Rutland 05401

DATE: _____

An appointment for screening has been set as follows at the site checked above. The screening findings and recommendations will be sent to you once screening has been completed.

Screening date _____ Time _____

Name of Student _____ Birthdate _____
(Month)(Day)(Year)

Home Mail Address _____ Parent _____

OR

Name of Adult _____ Birthdate _____

Home Mail Address _____

Basic handicap falls in the following checked category:

_____ Aphasia
_____ Deaf
_____ Emotional Problem
_____ Invisible Handicap
_____ Other (Please describe)

_____ Learning Problem
_____ Medical Problem
_____ Neuro-Muscular Disorder
_____ Suspected perception problem

Name of Person Screened *(Last)* *(First)* *(Middle)*

Details of Driver Education for the Handicapped Screening done on (date/dates) _____

EXPLANATION OF RATING SYSTEM: TO THE LEFT OF EACH ITEM CHECKED ARE THREE (3) COLUMNS FOR RATING. NO PROBLEM = +; REQUIRES HELP, EXTRA TIME, OR OTHER MODIFICATION = +*; LACKING OR IMPOSSIBLE = 0. AT THE RIGHT OF THE PAGE, AND IN SPACE FOR EACH GENERAL HEADING, SPACE TO DESCRIBE MODIFICATION/SPECIAL PROBLEM.

OCCUPATIONAL AND PHYSICAL THERAPY EVALUATION OF FUNCTION

+	+*	0	AREAS OF SCREENING	COMMENTS RE: SPECIAL PROBLEMS/NEEDED TESTING/ SUGGESTED MODIFICATIONS. (NOTE: "SENSATION" PERTAINS TO POSITION SENSE, TEMPERATURE, PRESSURE, PAIN, TACTILE DISCRIMINATION.)
			ARMS & HANDS (Joints)	
			STRENGTH	
			SENSATION	
			GRIP	
			INVOLUNTARY MOVEMENT	
			RANGE OF MOTION	
			SPEED	
			PRECISION	
			COORDINATION	
			LEGS & FEET (Joints)	
			STRENGTH	
			SENSATION	
			INVOLUNTARY MOVEMENT	
			RANGE OF MOTION	
			SPEED	
			PRECISION	
			COORDINATION	
			HEAD TURNING	
			RIGHT	
			LEFT	
			SITTING BALANCE	
			THINKING	
			JUDGEMENT	
			REACTION TIME	
			PROBLEM SOLVING	
			SHORT READING TEST	
			PERCEPTION	
			VISION	
			HEARING	

FORM #4 (Front Side)

DRIVER EDUCATION SCREENING IN SIMULATOR AND/OR CAR

+	+*	0	AREAS OF SCREENING	COMMENTS RE: SPECIAL PROBLEMS/NEEDED TESTING/ SUGGESTED MODIFICATIONS. (NOTE: "SENSATION" PERTAINS TO POSITION SENSE, TEMPERATURE, PRESSURE, PAIN, TACTILE DISCRIMINATION.)
			ENTERING CAR	
			OPENS DOOR	
			TRANSFERS SELF	
			NEEDS HELP TO TRANSFER	
			GETS IN UNASSISTED	
			PREPARING TO DRIVE	
			CLOSE DOOR AND LOCK	
			ADJUST SEAT	
			ADJUST MIRROR(S)	
			FASTEN SEAT BELT	
			STARTING CAR	
			INSERT KEY	
			TURN KEY	
			USE BRAKE (HAND AND FOOT)	
			USE ACCELERATOR	
			USE SIGNALS AND LIGHTS	
			TILT STEERING WHEEL	
			USE WIPERS	
			USE SHIFTING LEVER	
			DRIVING	
			BODY MOVEMENT FOR ADEQUATE VISION (ROTATE HEAD, BALANCE BODY)	
			SHIFT GEAR WHILE USING BRAKE	
			WHILE IN NEUTRAL STEER LEFT AND RIGHT	
			SHIFT TO DRIVE, GO STRAIGHT AHEAD USING GAS AND THEN BRAKE	
			SHIFT TO REVERSE AND RETURN TO STARTING POINT	
			RIGHT TURN WHILE DRIVING FORWARD & RETURN TO CENTER STEER	
			LEFT TURN WHILE DRIVING FORWARD & RETURN TO CENTER STEER	
			BACK RIGHT & RETURN (CHECK FOR CORRECT HAND POSITIONS)	
			BACK LEFT & RETURN (CHECK FOR CORRECT HAND POSITIONS)	
			STOP, SHIFT TO PARK, SET PARKING BRAKE & TURN OFF ENGINE	

COMMENTS ON PERCEPTION TESTING (IF DONE)

FORM #4 (Back Side)

SCREENING REPORT - VERMONT'S DRIVER EDUCATION PROGRAM FOR THE HANDICAPPED

Name of Person Screened_____ Address_____

Screeners and Profession of Each:

1. _____
2. _____
3. _____
4. _____

Persons (Agency) Receiving Screening Report:

1. _____
2. _____
3. _____
4. _____

Screened at _____ Dept. of Rehab. Medicine, Medical Center Hospital, Burlington 05401, 656-2750
or _____ Vt. Achievement Center, 88 Park Street, Rutland 05701, 773-2395

GENERAL RECOMMENDATIONS (BASED ON FINDINGS OF ATTACHED PAGE)

_____ Proceed with driver training without car modifications or adaptive equipment.
_____ Proceed with driver training with specific recommendations listed below.
_____ Repeat screening.
_____ See medical specialist (type: _____) and repeat screening if doctor advises it.

SPECIFIC RECOMMENDATIONS

1. CAR (VAN) MODIFICATIONS

FORM #5 (Front Side)

2. ADAPTIVE EQUIPMENT

3. SUGGESTED MODIFICATIONS FOR DRIVER TRAINING (Ex: More time needed, teach one process at a time, etc.)

If help is needed in carrying out/understanding recommendations, or understanding findings, please feel free to contact any screener at telephones on reverse side.

FORM #5 (Back Side)

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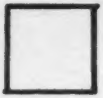
POST CARD



VERMONT ACHIEVEMENT CENTER
88 PARK STREET
RUTLAND
VERMONT 05701

LOAN EQUIPMENT FOR DRIVER EDUCATION

THE FOLLOWING ADAPTIVE EQUIPMENT FOR TRIAL/DRIVER TRAINING HAS BEEN RECEIVED # _____ DESCRIPTION: _____

(THE LOAN EQUIPMENT SERVICE OF DRIVER EDUCATION for the HANDICAPPED WILL FILL IN ABOVE) (PLEASE PRINT DATA BELOW)

DRIVER EDUCATOR _____ SCHOOL _____
SCHOOL ADDRESS _____ SCHOOL TEL. _ _ _ _ _ _ _ _
DRIVER EDUCATOR'S HOME ADDRESS _____
HOME PHONE _ _ _ _ _ _ _ BEST TIME TO CALL _____ AM or PM
APPROXIMATE TIME EQUIPMENT NEEDED _____ FOR _____
(INITIALS OF STUDENT)

AGREEMENTS:

1. I WILL NOTIFY VT. ACHIEVEMENT CENTER, RUTLAND (775-2395) IMMEDIATELY IF REPAIR IS NEEDED, IF THERE IS TROUBLE WITH INSTALLATION OR CONFUSION IN USE.
2. THE EQUIPMENT WILL BE USED ONLY FOR THE ABOVE STUDENT.
3. THE EQUIPMENT WILL BE RETURNED IMMEDIATELY ONCE NO LONGER NEEDED KNOWING SOME OTHER STUDENT/ADULT MAY BE WAITING FOR SAME.

DATE RECEIVED _____ SIGNED BY _____ (SIGNATURE)

NOTE: This will be sent with adaptive equipment when it is supplied on loan by the project's Loan Equipment Service at the Vermont Achievement Center, Rutland 05701.

BILL

EXTRA TIME, BEYOND USUAL SCHOOL DRIVER EDUCATION PROGRAM, REQUIRED FOR STUDENT WHOSE SPECIAL NEEDS ARE RELATED TO A HANDICAP.

NAME OF STUDENT _____
NAME OF DRIVER EDUCATOR AS CHECK SHOULD BE WRITTEN _____
ADDRESS WHERE CHECK SHOULD BE SENT _____

DETAILS OF SERVICES GIVEN BEYOND REGULAR DRIVER EDUCATION AND IN OUT-OF-SCHOOL TIME.

DATE	TIME SPENT	SERVICE GIVEN	COST

DETAILS IN STUDENT'S DRIVER EDUCATION FOR THE HANDICAPPED RECORD, UP TO DATE AT ALL TIMES, DOCUMENT BOTH THE NEED FOR AND THE RESULTS OF SERVICES CONNECTED WITH THESE CHARGES.

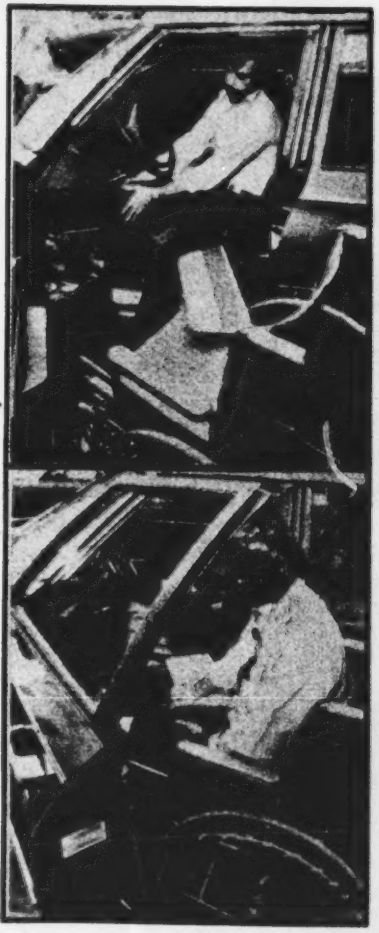
TOTAL DUE _____
DATE SENT _____
DATE PAID _____

FORM #7

TRANSFER

1. Learn taught procedure from trainee & exactly what help is needed.
2. Transfer may be done to & from wheel chair/car via transfer board if arms are weak; otherwise without board.
3. Paralyzed legs lack sensation of injury, heat, cold (good heater essential).
   a-Guard against bangs on sharp edges.
   b-Cover plastic seat in car parked in sun to prevent burn.
4. Be sure wheel chair, once properly placed for transfer, has locks engaged on both wheels, & foot plates flipped back before transfer.

ASSISTED



Self-storage of chair

UNASSISTED

RECORDS

THE NEED FOR RECORDS

1. To document the need for EXTRA COSTS (beyond the usual Driver Education Training).
2. To give statistical data on a new-to-Vermont program.
3. To list the problems/needs/partial solutions of students with handicaps as an aid in future program modifications.
4. To supply data, added to previously known information on regular Driver Education, which would ensure funding of all Driver Education in the future.
5. To supply facts of help to Motor Vehicle Inspectors; to the Commissioner of Motor Vehicles regarding possible needed changes in regulations; to document how many Vermonters with good potential for safe driving, cannot drive because their language disorders preclude success in taking the Learner's Permit examination.
6. To list systems which are especially successful with certain kinds of handicaps for eventual sharing with other driver educators.
7. To be complete and up-to-date at all times for study by the person responsible for the statewide program of all Driver Education - the Consultant on Driver Education, State Department of Education.
8. To determine how the Division of Special Education and Pupil Personnel and the Special Educators troughout Vermont may assist in this program. (Perhaps this should be included in teacher training sequences for the child with special needs in teacher training colleges.)
9. To share all facts with the student with special needs who, after careful study, was denied the privilege of driving for lack of needed skills; to share with parent(s)/guardian as well.
10. To use in the event the driver has an accident either during training or after licensing, to document details about his/her detailed study which determined the skills needed for safe driving.

CONTENTS OF THE RECORDS

1. Each student should have a folder with name clearly visible, placed where access by other students is not possible, and with the location known to school officials should the record be needed when the Driver Educator is unavailable.
2. There should be a brief summary of the student's intact or partially intact skills needed for driving to show why regular Driver Education is not feasible.
3. A brief diary, with suggested format, and examples below, would document the need for extra costs.
4. All forms used (or filled in copies) including signed parental consents, should be included.
5. Copies of any bills sent for extra costs.

DATE	TIME SPENT	SETTING DETAILS	OBJECTIVE OF SESSION & WHAT TRANPIRED
12/16/76	1½ hrs.	SNOWING ROAD TRAINING	To learn the skills of driving on "greasy snow"; manage windshield wiper for clear view, etc.; recover from a slight skid. Excellent wipers essential because of inability to get out & clear snow. Either de-froster on back window or outside mirror needed for rear visibility. Did well.
9/21/76	1 hr.	PERCEP-TION TESTING ON RANGE	Large, stiff box lid and toy car used before each exercise to demonstrate expectations. Preparation took entire period. Seems to manage one one-part directive at a time. Completion of Perception Training essential.
3/28/77	1½ hrs.	OUT-OF-TRAFFIC STREET FOR PARALLEL PARKING	Scanning/planning/turning ability, needed in parallel parking, done with poor planning. Needs <u>much</u> more training.
2/16/77	30 min.	IN PARKED CAR	Learning to manipulate car controls. Performance exceptionally poor compared to past. Session cut short on basis that recent illness may be related.
5/15/77	1 hr.	IN PARKED CAR	To develop independence in using key for door lock and ignition. Real problems encountered. Need to consult with occupational therapist at Screening Site before training in this area continues.
10/2/76	1 hr.	IN PARKED CAR	<u>Initial</u> exposure to car controls shows much confusion. Answer seemed to be to break down each skill into its component parts, get full attention of student, for directions, and then keep still while student applied directions. Hearing Driver Ed. talk while working was very distracting.
3/2/77	1½ hrs.	ROAD TRAINING IN RAIN	To explore entire array of skills taught for road work. Good retention & application; could finish road training now with non-handicapped group. Change could improve self confidence. Skills learned are good & well established.

COSTS

The following are the possible EXTRA costs of Driver Education for the Handicapped:

SCREENING - This varies by the time needed with costs for the therapists based upon the prevailing hourly cost for such services. The cost of the 2 Screening Sites should be kept in uniformity to base referrals on geographic convenience rather than on lower rate.

When extra evaluations beyond the usual are needed, extra screeners are needed resulting in added costs. For example, if a language/speech screening is required, a Speech Pathologist, normally not part of the team must be added, or an Audiologist for Hearing.

If extra consultation time is needed by the school Driver Educator from the screener driver educator (re: car modifications, installation, use of adaptive equipment, etc.) the screener should fill in a regular bill form (shown in manual, and send to Driver Education, State Dept. of Ed.).

INTERPRETER (for the deaf) - This service might be needed in part of the training process or in Motor Vehicles testing as well. Guidance in locating such a person might come from the Center for Disorders in Communication, DeGoesbriand Unit, Burlington; Vermont Achievement Center in Rutland (VAC); The Austine School in Brattleboro.

PERCEPTION TESTING - Described before under "Process of Definition/ Assessment/ Planning".

SHIPPING COSTS - To return adaptive equipment loaned from VAC.

OUT-OF-SCHOOL TIME FOR: (Hourly rate set yearly by State Dept. of Education; $10.00 1976-77).

One-to-one driver instruction on a range or on the road
Time to oversee proper installation of adaptive equipment
Time to oversee proper car modifications
Time to work with Motor Vehicles Inspector
Extra follow-up time

TRANSPORTATION FOR SCREENING - When a family has no resources for managing this.

REPLACEMENT OF DRIVER EDUCATION LOAN CAR STEERING WHEEL if damaged by adaptive equipment.

SPECIAL TEACHING MATERIALS - Such as concrete objects to simulate driving; practice signs if school lacks same, etc.

THIS IS A NEW PROGRAM. ANY NEW PROGRAM MAY RUN INTO UNEXPECTED COSTS. IF WHAT IS NEEDED IS OVER $50.00 THE DRIVER EDUCATOR SHOULD FIRST CONSULT WITH THE STATE DRIVER EDUCATION DIRECTOR.

IMPORTANT

NO SCHOOL DRIVER EDUCATOR IN VT. WHO TRAINS A PERSON WITH A HANDICAP IN THE SKILLS OF DRIVING (BEYOND THE BASIC SCHOOL PROGRAM)MAY ACCEPT FUNDS FROM ANYONE FOR THE SERVICE - FAMILY, AGENCY, INSURANCE COMPANY OR ANY OTHER SOURCE. ALL PAYMENT FOR EXTRA TIME AND SERVICES MUST COME FROM DRIVER EDUCATION, STATE DEPARTMENT OF EDUCATION, STATE OFFICE BUILDING, MONTPELIER, VERMONT 05602.

DEFINITION OF TERMS COMMONLY USED WHICH RELATE TO HANDICAPS

TERM	DEFINITION
ABDUCT	Movement of an extremity (arm or leg) away from the middle of the body.
ACUITY	The measurement of the ability of the eye to perceive the sharpness of objects in the direct line of vision.
ADDUCT	Movement of an extremity (arm or leg) toward the middle of the body.
ALBINISM	An hereditary absence of pigment in the eyeball, as elsewhere in body, resulting in defective vision.
AMBLYOPIA	Poor vision often from lack of use as in untreated strabismus.
AMPUTEE	A person without a limb due to surgery, accident, or a birth defect.
ANKYLOSIS	Partial or complete rigidity of a joint caused by disease or deliberately caused by surgery to help.
ANOMALY	Deviation in excess of normal variation. Often refers to a difference present at birth.
ASTIGMATISM	A visual focus problem related to different degrees in the curvature of the cornea of the eye and corrected by lenses.
ATAXIA	Loss of coordinated movement/position sense due to faulty function in lower part of brain.
ATHETOSIS	Repetitive, involuntary movements, due to brain damage impossible to control with treatment.
BRACE LOCKS	Braces support by their rigidity; brace locks allow bending when unlocked and rigidity when locked.
CEREBRAL PALSY	A complex handicap with variations resulting from brain damage the only constant of which is poor control of motion in some body part(s).
CONDUCTIVE HEARING LOSS	Hearing loss due to malformation or wax plug in ear canal, malformation or infection in middle ear which prevents the conduction of sound to the inner ear. May improve with care.
DECIBEL	A unit for the measurement of sound used to determine hearing level.
DEPTH PERCEPTION	The ability to gauge distances.
DYSFUNCTION	The prefix DYS - means difficult.
EPILEPSY	Irregular electrical discharge of the brain causing temporary lapse of consciousness known as a seizure, and more often than not controlled with medication.
EXTEND	Applied to body parts which bend, extension is the opposite motion; straighten out.
EXTREMITY	Arm or leg.
FIELD OF VISION	The entire area or field which can be seen without lifting the gaze.
FLEX	Opposite of extension; bend.
FOCUS	In the normal eye, light rays are bent by the lens so they focus on the retina at the back of the eye.
FREQUENCY OF SOUNDS	The number of vibrations per second which gives different pitches to sound.
FULL CONTROL BRACE	Long leg brace with band around the pelvis, or corset, to support legs.
HANDICAP-ACQUIRED	Handicap acquired following illness or accident.
HANDICAP - CONGENITAL	Handicap present at birth.

TERM	DEFINITION
HANDICAP - STATIC	Handicap not expected to worsen or improve.
HANDICAP - REGRESSION	Function in a handicapped person which slips backward temporarily or permanently.
HANDICAP - PLATEAU	Leveling off, in a normally progressive handicap, which may last briefly or for a long time.
HANDICAP - PROGRESSIVE	A handicap which, by diagnosis, is expected to get worse.
HEARING LOSS - MILD	Hearing loss between 25-40 decibels in sounds used in speech. No problem at close range.
HEARING LOSS - MODERATE	Hearing loss between 40-50 decibels in sounds used in speech. May need a hearing aid. Face person when talking.
HEARING LOSS - MOD. TO SEVERE	Hearing loss between 50-70 decibels in sounds used in speech. Has to be near speaker and use aid.
HEARING LOSS - SEVERE	Hearing loss between 70-90 decibels in sounds used in speech - needs aid plus eyes to understand speaker.
HEARING LOSS - PROFOUND	Hearing loss over 90 decibels - needs aid & lip reading and even then has trouble with speech. Face person.
HEMIANOPSIA	Blindness in the same half of the visual fields of both eyes.
*HEMIPARESIS	Partial paralysis of one side of body.
*HEMIPLEGIA	Complete paralysis of one side of body caused by damage to opposite side of brain.
HYPEROPIA	Farsighted. Light rays focus behind the retina rather than on it. Corrective lenses used to compensate.
INVOLVEMENT	Professional jargon meaning a body part which is not functioning normally.
LOWERS	Professional jargon used to denote legs.
MULTIPLE SCLEROSIS	A progressive disease often with plateaus with seeming improvement which affects motion control wherever nerve coverings are effected.
MUSCULAR DYSTROPHY	A progressive disease of muscle tissue resulting in diminished strength.
MYOPIA	Nearsighted. Light rays focus in front of retina making seeing far off objects difficult without corrective lenses.
NEURO-SENSORI LOSS	Damage to the nerves of hearing or the inner ear - not reversible with care.
NIGHT BLINDNESS	A condition in which sight is good by day but deficient at night and in faint light.
NYSTAGMUS	An involuntary, rapid movement of the eyeball lateral, vertical, rotary or mixed.
OPPOSITION SPLINT	A molded small and removable hand splint which makes thumb-forefinger grasp possible.
*PARAPERESIS	Partial paralysis of legs such as might be caused by polio.
*PARAPLEGIA	Total paralysis of legs due to a spinal cord or brain injury. Often bladder and bowel control are affected but not always.
PERIPHERAL VISION	Ability to perceive the presence, motion, or color of objects outside of the direct line of vision.
PRESBYOPIA	The gradual lessening of the ability of the eye to focus which accompanies age.
PROSTHESIS	An artificial substitute for a missing body part be it dentures, an artificial leg, an artificial limb, etc.
PROSTHETIC DEVICE	
*QUADRIPARESIS	Complete paralysis of the body below the arms and some dysfunction in arms/hands short of paralysis.
*QUADRIPLEGIA	Complete paralysis below the neck.
RANGE OF MOTION	How a body joint rotates, flexes (bends) or extends in relation to the normal.

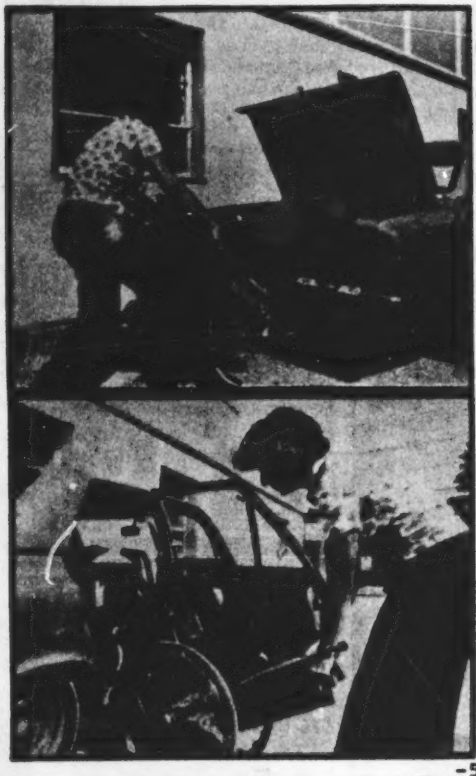
TERM	DEFINITION
ROTATE	Turning of a body part inward or outward.
SHORT BRACES	From the knee or even below to the shoe.
SPINA BIFIDA	A deficit in the bony structure of the spinal column which allows the cord and protective fluid to herniate out through the opening causing complete or partial paralysis below the site.
SPINAL COLUMN	The series of bones from head to tail bone which enclose and protect the spinal cord and allow the trunk to bend and turn.
STRABISMUS	One eye relative to the other, does not line up to the object seen and may turn out, in, up or down instead of forward as the other eye is looking.
TRANSFER	Transfer by a wheel chair user to a car or other seat with or without a transfer board.
TUNNEL VISION	The lack of peripheral vision simulating looking through a tube.
UPPERS	Professional jargon used to denote arms.
VERTEBRAE - CERVICAL	The vertebrae in the neck area of the back bone (C6 means the 6th vertebrae from the head).
VERTEBRAE - THORACIC	The 12 vertebrae in the check area of the back bone (T11 means the 18th vertebrae from the head).
VERTEBRAE - LUMBAR	The 5 vertebrae in the abdominal area of the back bone (L5 means the 24th vertebrae from the head).
VERTEBRAE - SACRAL	The tail bone which is a combination of the sacrum and the coccyx fused together.

* Commonly hemiplegia, paraplegia and quadriplegia are misused and should be hemiparesis, paraparesis, or quadriparesis if some function remains; - plegia if no function remains.

SOME MEDICAL/ANCILLARY PERSONNEL WORKING WITH THE HANDICAPPED

AUDIOLOGIST	Specialist in the physics of hearing. Tests hearing, often fits hearing aids, teaches speech reading, etc.
NEUROLOGIST	Specialist who treats dysfunction in the central nervous system.
OCCUPATIONAL THERAPIST	Primarily interested in self help skills and skills involving upper part of body - head, arms, hand, etc.
OCULIST	A physician - an M.D. - who specializes in diagnosis
OPHTHALMOLOGIST	and treatment of defects and diseases of the eye; performs surgery if indicated.
OPTICIAN	One who grinds lenses by prescription, fits them into frames, and frames to wearer.
OPTOMETRIST	Determines presence of vision problems and eye diseases; prescribes and adapts lenses or optical aids and may direct vision training to preserve or restore maximum efficiency of vision.
ORTHOPEDIST	Specialist in the function of motion involving bones, joints, tendons and muscles.
OTOLARYNGOLOGIST	Ear, nose and throat specialist.
PHYSICAL THERAPIST	Person especially trained to restore or improve motor function through exercise, heat, massage, water, etc.
PHYSIATRIST	Medical specialist with focus on rehabilitation medicine.
REHABILITATION NURSE	Nurse, especially trained in the broad rehabilitation field.
SPEECH PATHOLOGIST	Person trained in communication - language, speech, articulation, speech fluency, etc.

TERM	DEFINITION
ADAPTIVE EQUIPMENT	Refers to any hand or foot operated driving equipment, used to compensate for a functional disability, which makes driving possible and safe. It might involve devices for steering with one hand, a hook in place of a hand or arm and hand, a device which makes steering possible, with hand made secure on the wheel, by the shoulder, or even steering by a foot if arms are paralyzed or missing; devices for operating gas, brakes, horn, dimmer switch and windshield wipers; a device to make grasp and use of any car key possible and certain.
CAR MODIFICATIONS	Special seat modification; different size steering wheel to reduce need for arm extension; special step; grab bar; arm rest for balance; special seat belt, etc.
VEHICLE SELECTION	Height, size of doors, type of front seat, upholstery (to facilitate sliding and not for appearance), van with or without lift, belts and clamps if driven from wheel chair, car which accommodates adaptive equipment needed, etc.



Close folding chair by simultaneously lifting up middle of seat front and back.

Remove removables - arms, foot plates, leg rests - before storage.

Bend knees and tip folded chair against thigh of right leg to distribute weight between leg, back and arms. Lift chair over ledge into trunk as legs and body are straightened.

ASSISTED WHEEL CHAIR STORAGE IN TRUNK OR CAR WITHOUT BACK STRAIN

(most chairs weigh 27-50 pounds.)

Check width and height of chair and car space for car storage. If adequate, tip chair way back on large rear wheels and roll over threshold into car without need to lift. Engage wheel brakes to avoid rolling during storage but remember to disengage brakes before rolling out.

HAND CONTROLS

Added to precise steering, the quick and sure management of foot brake and accelerator is essential to safe driving with hand controls. This means not only mastery of controls, but safety-tested equipment coupled with proper installation in a car which ALWAYS meets inspection standards - tires, brakes, lights, good battery, motor tune-up (and adequate insurance) whether the car used for training is a school loan car or owned by the trainee.

The above pictures the brake & gas hook-up.

Below is a hand control in use in the simulator.

THE INTERNATIONAL SYMBOL FOR THE HANDICAPPED is not only used on Vermont's special license plates, but on parking places reserved for the handicapped, businesses and public buildings, including rest rooms, which have shown by an architectural barriers survey are barrier free.

AND OFF GOES THE DRIVER WITH A HANDICAP

TO SCHOOL
TO WORK
TO CHURCH
TO WHEREVER like any other Vermonter!